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THE

REGISTRAR GENERAL'S

C

STATISTICAL REVIEW

OF

ENGLAND AND WALES

FOR THE YEAR

1954

PART III

COMMENTARY

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EXPLANATORY NOTES

1. New or Recent Changes in Presentation

Title of Volume

From 1954 the title of this volume of the Statistical Review will be " Part III, Commentary."

Aggregate summaries by type of area

National aggregate summaries by type of area relate to aggregates of (a) conurbations, and (b) areas outside the conurbations, including separately:—Urban Areas with (i) populations of 100,000 and over, (ii) populations of 50,000 and under 100,000, and (iii) populations under 50,000; and Rural Districts. For this purpose "Urban Areas" includes Boroughs and Urban Districts as defined under the Local Government Acts, and Rural Districts are as defined under those Acts.

2. Populations

Some of the rates shown in this volume for years 1951, 1952 and 1953 differ slightly from similar rates published in the Tables volumes of the Statistical Review for those years owing to the revision, in the light of final data from the 1951 Census, of the population estimates on which they are based (see 1953 Text, page 8).

The mid-1954 estimates of population, both national and local (except those of married women by age and duration or year of marriage), were based upon final figures from the full tabulations of the 1951 Census.

3. Numbering of Tables

Of the tables referred to in this review, those numbered in Arabic numerals will be found in " Part I Tables, Medical " and those lettered will be found in " Part II Tables, Civil " for the year in question, whilst those numbered in Roman numerals appear in this volume.

4. Indication of Significance

Rates based upon less than 20 births, deaths or notifications are distinguished by italic type as a warning to the user that the smallness of the experiences may affect their significance.

Rates given as 0 indicate that the rate is less than half the final digit shown. A dash (—) in any column indicates that there were no events.

5. Definition of Areas

London = Administrative County of London which consists of the City of London (including the Inner and Middle Temples) and the Metropolitan Boroughs.

C.B. = County Borough ; M.B. = Municipal Borough ; Met. B. = Metropolitan Borough; U.D. = Urban District ; R.D. = Rural District.

6. Standard Regions

The constitution of the Standard Regions of England and Wales used in this volume is as follows :—

REGION I.
Northern
Cumberland.
Durham.
Northumberland.
Westmorland.
Yorkshire, North Riding.

REGION II.
East and West Ridings.
Yorkshire, East Riding.
Yorkshire, West Riding.

REGION III.
North Midland
Derbyshire, Part of [1]
Leicestershire.
Lincolnshire—
Parts of Holland.
Parts of Kesteven.
Parts of Lindsey.
Northamptonshire.
Nottinghamshire.
Peterborough, Soke of
Rutland.

REGION IV.
Eastern
Bedfordshire.
Cambridgeshire.
Ely, Isle of
Essex, Part of [2]
Hertfordshire, Part of [3]
Huntingdonshire.
Norfolk.
Suffolk, East.
Suffolk, West.

REGION V.
London and South Eastern
Essex, Part of [4]
Hertfordshire, Part of [5]
Kent.
London Admin. County.
Middlesex.
Surrey.
Sussex, East.
Sussex, West.

REGION VI.
Southern
Berkshire.
Buckinghamshire.
Dorset.
Oxfordshire.
Southampton.
Wight, Isle of

REGION VII.
South Western
Cornwall.
Devon.
Gloucestershire.
Somerset.
Wiltshire.

REGION VIII.
Wales I. (South East)
Brecknockshire.
Carmarthenshire.
Glamorganshire.
Monmouthshire.

Wales II. (Remainder)
Anglesey.
Caernarvonshire.
Cardiganshire.
Denbighshire.
Flintshire.
Merionethshire.
Montgomeryshire.
Pembrokeshire.
Radnorshire.

REGION IX.
Midland
Herefordshire.
Shropshire.
Staffordshire.
Warwickshire.
Worcestershire.

REGION X.
North Western
Cheshire.
Derbyshire, Part of [6]
Lancashire.

1. All except Buxton M.B., Glossop M.B., New Mills U.D., Whaley Bridge U.D., and Chapel en le Frith R.D.

2. All except East Ham C.B., West Ham C.B., Chingford M.B., Wanstead and Woodford M.B., Leyton M.B., Walthamstow M.B., Ilford M.B., Barking M.B., Dagenham M.B., Waltham Holy Cross U.D., and Chigwell U.D.

3. All except Barnet U.D., Bushey U.D., Cheshunt U.D., East Barnet U.D., and Elstree R.D.

4. All areas stated in 2 above.

5. All areas stated in 3 above.

6. All areas stated in 1 above.

7. Conurbations

The conurbation areas used in this volume are those which were agreed in 1950, under the aegis of the Interdepartmental Committee on Social and Economic Research and the Central Statistical Office, for the presentation of official statistics generally.*

Conurbation is the word used to describe certain areas of urban development where a number of separate towns have grown into each other and become linked by such factors as a common industrial or business interest, or a common centre of shopping, education, etc. The conurbations each consist of an aggregation of entire local authority areas and are constituted as follows :—

Tyneside :

Durham (pt. of)	*Durham (pt. of)—contd.*	*Northumberland (pt. of)*	
Gateshead C.B.	Felling U.D.	Newcastle upon Tyne C.B.	Longbenton U.D.
South Shields C.B.	Hebburn U.D.	Tynemouth C.B.	Newburn U.D.
	Jarrow M.B.		Wallsend M.B.
	Whickham U.D.	Gosforth U.D.	Whitley Bay M.B.

West Yorkshire:

Yorkshire, West Riding (pt. of)

Bradford C.B.	Aireborough U.D.	Heckmondwike U.D.	Ossett M.B.
Dewsbury C.B.	Baildon U.D.	Holmfirth U.D.	Pudsey M.B.
Halifax C.B.	Batley M.B.	Horbury U.D.	Queensbury and Shelf U.D.
Huddersfield C.B.	Bingley U.D.	Horsforth U.D.	Ripponden U.D.
Leeds C.B.	Brighouse M.B.	Keighley M.B.	Rothwell U.D.
Wakefield C.B.	Colne Valley U.D.	Kirkburton U.D.	
	Denby Dale U.D.	Meltham U.D.	Shipley U.D.
	Denholme U.D.	Mirfield U.D.	Sowerby Bridge U.D.
	Elland U.D.	Morley M.B.	Spenborough U.D.
			Stanley U.D.

South East Lancashire :

Cheshire (pt. of)	*Lancs. (pt. of)*	*Lancs. (pt. of)—contd.*	*Lancs. (pt. of)—contd.*
Stockport C.B.	Bolton C.B.	Horwich U.D.	Urmston U.D.
	Bury C.B.	Irlam U.D.	Wardle U.D.
Alderley Edge U.D.	Manchester C.B.	Kearsley U.D.	Westhoughton U.D.
Altrincham M.B.	Oldham C.B.	Lees U.D.	Whitefield U.D.
Bowdon U.D.	Rochdale C.B.	Littleborough U.D.	Whitworth U.D.
Bredbury and Romiley U.D.	Salford C.B.	Little Lever U.D.	Worsley U.D.
Cheadle and Gatley U.D.	Ashton under Lyne M.B.	Middleton M.B.	
Dukinfield M.B.	Audenshaw U.D.	Milnrow U.D.	
Hale U.D.	Chadderton U.D.	Mossley M.B.	
Hazel Grove and Bramhall U.D.	Crompton U.D.	Prestwich M.B.	
Hyde M.B.	Denton U.D.	Radcliffe M.B.	
Marple U.D.	Droylsden U.D.	Royton U.D.	
Sale M.B.	Eccles M.B.	Stretford M.B.	
Stalybridge M.B.	Failsworth U.D.	Swinton and Pendlebury M.B.	
Wilmslow U.D.	Farnworth M.B.	Tottington U.D.	
Disley R.D.	Heywood M.B.		

Merseyside :

Cheshire (pt. of)	*Cheshire (pt. of)—cont.*	*Lancs. (pt. of)*	*Lancs. (pt. of)—cont.*
Birkenhead C.B.	Ellesmere Port U.D.	Bootle C.B.	Huyton with Roby U.D.
Wallasey C.B.	Hoylake U.D.	Liverpool C.B.	Litherland U.D.
	Neston U.D.		
Bebington M.B.	Wirral U.D.	Crosby M.B.	

* See *Census 1951, England and Wales, Preliminary Report*, page xxii, H.M.S.O. price 5s. 0d.: (5s. 3d. by post); also *Census 1951, England and Wales, Report on Greater London and Five Other Conurbations*, page xv, H.M.S.O. price £5 5s. 0d.: (£5 6s. 9d. by post).

West Midlands :

Staffs. (pt. of)	*Staffs. (pt. of)—contd.*	*Warwickshire (pt. of)*	*Worcestershire (pt. of)*
Smethwick C.B.	Darlaston U.D.	Birmingham C.B.	Dudley C.B.
Walsall C.B.	Rowley Regis M.B.		
West Bromwich C.B.	Sedgley U.D.	Solihull M.B.	Halesowen M.B.
Wolverhampton C.B.	Tettenhall U.D.	Sutton Coldfield M.B.	Oldbury M.B.
	Tipton M.B.		Stourbridge M.B.
Aldridge U.D.			
Amblecote U.D.	Wednesbury M.B.		
Bilston M.B.	Wednesfield U.D.		
Brierley Hill U.D.	Willenhall U.D.		
Coseley U.D.			

Greater London :

London	*Surrey (pt. of)—contd.*	*Kent (pt. of)—contd.*	*Essex (pt. of)*
Middlesex	Kingston upon Thames M.B.	Chislehurst and Sidcup U.D.	East Ham C.B.
Surrey (pt. of)	Malden and Coombe M.B.	Crayford U.D.	West Ham C.B.
	Merton and Morden U.D.	Erith M.B.	
Croydon C.B.	Mitcham M.B.	Orpington U.D.	Barking M.B.
	Richmond M.B.	Penge U.D.	Chigwell U.D.
Banstead U.D.			Chingford M.B.
Barnes M.B.	Surbiton M.B.	*Herts (pt. of)*	Dagenham M.B.
Beddington and Wallington M.B.	Sutton and Cheam M.B.		Ilford M.B.
	Wimbledon M.B.	Barnet U.D.	Leyton M.B.
Carshalton U.D.		Bushey U.D.	Waltham Holy Cross U.D.
Coulsdon and Purley U.D.	*Kent (pt. of)*	Cheshunt U.D.	
		East Barnet U.D.	Walthamstow M.B.
Epsom and Ewell M.B.	Beckenham M.B.	Elstree R.D.	Wanstead and Woodford M.B.
Esher U.D.	Bexley M.B.		
	Bromley M.B.		

8. Assignment of Vital Statistics by Area

In all tables births and stillbirths are classified according to the area of usual residence of the parents (or mother), and deaths according to the usual residence of the deceased. The definition of usual residence for this purpose was modified in 1953, the main change being that inmates of hospitals for the chronic sick and of mental and mental deficiency hospitals were in that year regarded as having been resident in the hospital. (A similar change with regard to persons dying in accommodation provided under Parts III and IV of the National Assistance Act, 1948, had already been brought into effect during 1952). Rates for areas in 1953 are therefore not comparable with those for 1952. Details of the new definitions were conveyed to Medical Officers of Health in 1952 in a memorandum which was reproduced in the 1953 Text volume. The method of classification of chronic sick hospitals for this purpose was slightly modified in 1954 and rates for a certain number of smaller areas may not be comparable with those of 1953.

9. General

See also the Explanatory Notes to the Tables volumes, Parts I and II.

CORRIGENDA

Statistical Review, 1953, Text Volume

Page v — Meningitis and Encephalitis: Infections of the central nervous system, crude death rates per million living, England and Wales, 1940 to 1953: *for* Table LXI *read* Table LX.

Page 209 — Second table, mid-page: "Accidents and violence: Death rates per million living by sex and age, 1901 to 1953." Number of table: *for* XCVII *read* XCVIII.

INTRODUCTION

The primary object of this volume is to provide a commentary on those statistics of the year 1954 which have already been published in the Tables volumes of the Statistical Review. This commentary aims to set the statistics in perspective particularly by drawing attention to trends and significant characteristics which will be a guide to research workers and others concerned with public health and with vital and health statistics. It also seeks to explain the reasons for changes in presentation of the statistics as the interest and the significance of different factors change.

In addition to this primary aim it is necessary to relate the vital statistics of a year to other work in similar fields. In particular, there have been great developments since the war in international discussion and interest in the fields of demography and health statistics ; reference to the activities of such bodies as the World Health Organization and the Population and Statistical Commissions of the United Nations assists understanding of their influence on work in similar fields in this country and at the same time illustrates the contribution made by this country to their work. Some account of these activities is given below.

A brief description is added of some other activities of the General Register Office. This includes an account of the volume of business in the registration service during the year, a list of committees on which the Registrar General was represented and a list of published contributions by officers of the Department.

Civil and Medical Statistics

The statistical commentary in this volume falls into two main parts corresponding to the division of the Tables volumes into Civil and Medical statistics respectively.

The civil part is concerned in the main with population, births, marriages and divorces. The primary aim here is to show what trends are apparent in post-war experience and to compare them as far as possible with the pre-war tendencies.

The medical part of the volume deals primarily with mortality statistics derived from registration records, still the most useful and reliable general statistics on disease and death, but also reflects to some extent the increased attention given by the Department in recent years to attempts at the more direct study of morbidity.

Figures of notifications of infectious diseases are included in Part I of the Review (Medical Tables). The present volume discusses the numbers of notifications of tuberculosis, and statistics derived from records of Mass Miniature Radiography.

As a step towards improving knowledge of the illnesses of the population, a pioneer study was begun early in 1951, when a small group of general practitioners started recording, for statistical analysis by the General Register Office, details of consultations by their patients. The results of this enquiry were

published in two special reports.* Plans were subsequently made, in collaboration with the College of General Practitioners, to conduct a similar enquiry based on the records of some 100 practices over the period 1st May, 1955, to 30th April, 1956.

As in previous years, the Registrar General is indebted to the Advisory Committee on Medical Nomenclature and Statistics, under the chairmanship of Sir Ernest Rock Carling, for much valuable advice and assistance in connexion with the various medical enquiries undertaken by the Department and generally. A Report relating to the Committee's work during 1951 and 1952 was published in the 1952 Text volume, and a further Report dealing with the years 1953 and 1954 will be found on pages 200-203 below. The membership of the main Committee and of the Sub-Committees is shown in the Report.

Population

Estimates of the total, home and civilian populations of England and Wales were prepared for 1954 on the usual lines. The ageing of the population is demonstrated by the increased proportions in the 65 and over age-groups, at which ages the proportion of females has also risen by virtue of their advantage in the general improvement in longevity. Estimates of the population by marital condition have also been prepared.

Births and Fertility

There was a slight decrease in the number of births in 1954 (673,651), as compared with 1953, (684,372), but the figure was almost the same as the 1952 total, 673,735. The 1954 figure represented a rate per thousand population of all ages of 15·1 as compared with 15·4 in 1953 and 15·1 in 1938. The 1954 rate continues the persistent though very gradual downward trend which followed the violent movement of the war and immediate post-war years.

Various factors are examined bearing on the question whether the births currently occurring are sufficient to ensure the maintenance of the population at its present level. It is suggested that deductions from the current experience, which, considered in isolation, appear to indicate that the population is more than replacing itself, may be misleading (see pages 11-13). High marriage rates and earlier marriage ages, combined with a tendency for family building to be done during the earlier years of marriage, have led to some inflation in the current birth figures.

The detailed analysis continues the various features which have customarily formed the subject of comment in recent Statistical Reviews.

Marriages

During 1954 there were 341,731 marriages registered in England and Wales as compared with 344,998 in 1953. But, while the incidence of marriage has fallen steadily since 1947 (apart from a small fluctuation in 1951) in relation to the total population, it has not shown any such pronounced trend when considered in relation to the unmarried population of marriageable age.

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* Studies on Medical and Population Subjects:–

No. 7 : General Practitioners' Records - An analysis of the clinical records of eight practices during the period April, 1951 to March, 1952. H.M.S.O., price 8s. 6d. net.

No. 9 (in continuation of Study No. 7): General Practitioners' Records - An analysis of the clinical records of some general practices during the period April, 1952 to March, 1954. H.M.S.O., price 6s. 6d. net.

The decline in total marriage incidence when related to the unmarried population appears to have begun in 1952 but as yet to have been slow and relatively small in extent. Some such decline was to be expected, with the high marriage rates of recent years reducing the marriageable population. But it has not yet appreciably affected the important element of first marriages at young ages. Marriage rates for spinsters were higher in 1954 than in 1953 at ages under 25, and the average age at marriage was still falling. One factor underlying the persistence of high marriage rates is that, while the ratio of males to females at ages 15-44 in the total population has been rising continuously since 1921, it has risen still more in the unmarried section of the population at these ages (see page 42).

Divorce and Remarriage

Since the end of the Second World War there have been large fluctuations in the annual number of divorces. In 1954 some 28,000 decrees were made absolute and 29,000 new petitions were filed. Several more years will be needed before the long-term trend can be ascertained. The 1954 level of incidence of decrees, when related to the number of antecedent marriages from which they arise, indicates that about 7 per cent of marriages are terminated by divorce.

To ascertain the impact of divorce on the population and on the number of legitimate births, it is necessary to examine the combined effect of the incidence of divorce and of the remarriage of divorced persons. Such consideration suggests that the number of divorced persons who remarry is still rising. In 1954 as in 1953 this was in the region of two thirds to three quarters, so that the net loss to the married population was only a fraction of the total number divorced.

Mortality in 1954

The number of deaths registered in England and Wales in 1954 was 501,896. The crude death rate was 12·2 deaths per thousand males and 10·5 per thousand females. The crude rate of 11·3 for the sexes combined was equal to that of 1952 and has been lower only once before, in 1948 when the rate was 11·0.

At each age the death rate of males was higher than that of females, and at ages 45-64 the male rate was nearly 75 per cent higher than the female rate. On the basis of the death rates for 1952-1954 the average expectation of life of a female at birth would be over 5 years more than that of a male. At ages 1-24, where accidents are the chief cause of death, the male excess is accounted for by the higher male accident death rate. This is most marked at ages 15-24 where the male rate for motor vehicle accident deaths, the largest cause, is seven times the female rate. At ages 45-64 the higher male death rates from arteriosclerotic heart disease (including coronary disease) and cancer are the chief causes of the male excess.

Infant Mortality and Stillbirths

In 1954 the infant mortality rate was 25·4 per 1,000 related live births, 5 per cent lower than in 1953. This was the lowest annual rate so far recorded. The stillbirth rate was 23·5 per 1,000 live and stillbirths, an increase of 5 per cent. 70 per cent of all deaths under 1 year of age occurred in the first four weeks of life and 59 per cent in the first week. Over 90 per cent of the first week deaths were due to congenital malformations and other prenatal and natal causes.

It is a matter for concern that there should be such wide variation in the infant mortality rates for the various areas of England and Wales. Among the regions, Wales I, comprising the counties of Brecknock, Carmarthen, Glamorgan and Monmouth, had the highest rates for total infant mortality and for stillbirths,

whereas London and the South Eastern region had the lowest of these rates. Mortality due to congenital malformations was 43 per cent higher in Wales (as a whole) than in the South of England. Wide variations were also found among the county boroughs. Thus Merthyr Tydfil had a perinatal mortality rate (stillbirths and first week deaths combined) of 70·0. That of Eastbourne was 20·8. The highest rate of infant deaths after the first week of life, that of West Hartlepool, was 23·1 ; the lowest was 3·9 in East Ham.

Tuberculosis

Deaths from tuberculosis (all forms) in 1954 numbered 7,897, compared with 24,163 in 1944 and 60,205 in 1904. Of the deaths in 1954, 7,069 were from tuberculosis of the respiratory system. Two thirds of the respiratory deaths were of males, but at adolescent and young adult ages deaths of females exceeded those of males. Death rates continued to be highest in the large towns and conurbations, particularly Tyneside and Merseyside.

Cancer

During 1954, 47,313 men and 42,782 women died from malignant neoplasms, cancer of the digestive organs being the most frequently recorded. Deaths due to cancer of the lung again increased. Although the mortality rate from this cause is still much higher in the urban areas, the rate of increase now appears to be greater in the rural areas.

Infectious Diseases

The present volume does not contain a general commentary on notifications and deaths for the infectious diseases. Deaths from tetanus during 1954 are discussed on pages 108-110. A special study showed that of 61 deaths due to tetanus, only 37 were actually assigned to tetanus (No. 061 in the International Statistical Classification), the majority of the remainder being assigned to the injury or other cause which the tetanus followed. The existing international procedure results in reducing the apparent number of deaths due to tetanus, with possibly little statistical advantage to the other causes to which the deaths are assigned.

Cardiovascular Diseases

Special attention is given in this volume to subacute endocarditis and pulmonary embolism. This is preceded by a brief review of mortality from cardiovascular diseases in general. The section contains the result of an analysis of all certificates received from May to December, 1954, with mention of subacute bacterial endocarditis or a synonym, which was carried out in collaboration with the World Health Organization Centre for Classification of Diseases. The analysis indicates that the existing provisions in the International Statistical Classification for dealing with this condition are not wholly satisfactory, although there is no reason to believe that this has biased the downward trend in the annual numbers of deaths assigned to the disease.

A similar analysis of certificates mentioning pulmonary embolism and infarction, mortality from which continued to increase, was made with similar conclusions.

Accidental and Violent Deaths

There were 12,630 male and 8,239 female deaths in 1954 from accidental or violent causes. Except for children aged 0-14 years, accidental and violent deaths as a percentage of all causes continued to increase for both sexes.

Accidental falls, suicides and motor vehicle accidents were again the most frequent causes of violent deaths.

Motor vehicle accidents on public highways caused the deaths of 3,289 males and 1,158 females in 1954, an increase of 2 per cent for males and 13 per cent for females on the numbers for 1953. These numbers included 1,057 male and 70 female motor cyclists.

During 1954 there were 2,452 male and 4,165 female deaths certified as due to accidents in the home or residential institutions. Of these, 72 per cent were deaths of persons aged 65 and over, and 55 per cent were of persons aged 75 and over. Deaths of children under 5 accounted for 687 deaths, 10 per cent of the total. Of these, 404 were deaths of children under 1 year certified as due to various forms of choking and suffocation. There are grounds for believing that a substantial proportion of these deaths may be due not to accident but to obscure natural causes.

International Co-operation in Population and Health Statistics

A number of meetings in 1954, of varying size and character, made significant contributions to international work on population and health statistics. A review of these developments, some of which are referred to below, will be found on pages 213-219.

The Statistical Commission of the United Nations met in Geneva for its eighth session and, in its report, announced the proposal to publish a manual describing methods used in vital statistics to supplement an earlier publication : *Principles for a Vital Statistics System.*

An Advisory Group to the World Health Organization Centre for the Classification of Diseases met in February at the General Register Office to begin preparations for the Seventh Revision of the *International Statistical Classification of Diseases, Injuries and Causes of Death.* The views of Governments on the Advisory Group's report were considered later in the year at the fourth session of the WHO Expert Committee on Health Statistics which was attended by an officer of the Department.

The Department was represented at the Seventh World Health Assembly and also took part in the Eighth International Conference of Labour Statisticians (which advanced the proposed *International Standard Classification of Occupations* a stage further) and in the work of a Group appointed by the OEEC Manpower Committee to advise on forecasts of the population of Western Europe.

A notable and well attended World Population Conference was held in Rome under the rules for the calling of non-governmental conferences by the Economic and Social Council. It was convened on a fact-finding basis, being limited in terms to the exchange of ideas and experience. Among those present from this country were two of the Department's Officers.

POPULATION

Population of England and Wales

The estimated population of England and Wales as at 30th June, 1954, is shown in Table I.

Table I.—Estimated Population of England and Wales, Mid-1954
(*Thousands*)

	Persons	Males	Females
Total ..	44,480	21,492	22,988
Civilian ..	43,742	20,774	22,968
Home ..	44,274	21,288	22,986

The three different types of population shown are based on different concepts. For the *home* population, all Armed Forces (including Commonwealth and Allied Forces) are treated as resident where stationed. If the whole contribution of England and Wales to the United Kingdom Forces, whether at home or abroad, is included, and Commonwealth and Allied Forces here are excluded, this provides a measure of the *total* population to which England and Wales can lay claim (in this measure merchant seamen and British visitors abroad are excluded, but are roughly balanced by visitors to this country, who though included are not properly members of the population of England and Wales). If all Armed Forces are excluded this provides the *civilian* population.

Population Movement

The 1954 estimates of total population have been built up from those for 1953 shown in the Text Volume for that year by the usual process of adding births and immigrants and subtracting deaths and emigrants. The available data on the details of migration have become somewhat meagre since the abolition of the National Register in 1952. Food rationing while it continued provided useful information about the volume of movement into and out of the country. But for most purposes it came to an end in May, 1954*. Thus, the mid-year estimates benefited from the statistics derived from it before that time, but these had to be supplemented by the partial data collected by the Board of Trade and the Home Office. The composition of migration by sex, age and marital condition, needed for the estimates in Tables 1, 2, A2 and A3 in the Tables Volumes, was assessed largely on the basis of earlier experience of National Registration records.

The increase of 179,000 (95,000 males and 84,000 females) in the estimated total population since mid-1953 amounts to 0·4 per cent. It is entirely accounted for by natural increase ; there was probably a trivial net emigration.

Sex and Age

The estimates of the total, civilian and home populations of England and Wales by sex and age as at 30th June, 1954, are shown in Tables 1 and A2. They have been derived from those of the previous year in the same way as before, ageing the numbers at mid-1953 by one year, adding the births of the twelve months at age 0 and the immigrants at the ages they would have had at

*The last part disappeared on 3rd July, having been little more than formal for the intervening months.

mid-year, and deducting the deaths and emigrants at the corresponding ages. The civilian and home populations are obtained from the total population by subtracting or adding the appropriate types of non-civilians.

The proportions of the total population in broad age-groups in 1939 and 1954 are shown in Table II. The development of the ageing process resulting from the decline from the high fertility of the late nineteenth century and from improving longevity is illustrated by the progressive increase in the proportion of the age-group 65 and over. In 1901, when the population structure had been rendered youthful by the antecedent period of high fertility, this proportion was only 47 per thousand. By 1939 it had increased to 89 and in 1954 it was estimated to be 114 per thousand. Between 1939 and 1954 the total proportion in the working age-group 15-64 decreased from 701 to 662 per thousand and this segment of the population as a whole aged, the proportion over 45 having increased while the proportion under that age decreased. The proportion of children was higher in 1954 than in 1939 as a result of the high birth rates of the immediate post-war years.

Table II.—Proportions by Sex and Age in the Total Population, 1939 and 1954, England and Wales

Sex and Age Group	Per thousand of Total Population	
	1939	1954
Under 15, Males and Females	210	224
15–44 { Males	234	207
15–44 { Females	241	208
45–64 { Males	104	116
45–64 { Females	122	131
65 and over, Males and Females	89	114
Total	1,000	1,000

The following summary shows the changes which have taken place in sex ratios at different ages. The ratio of females to males in the total population of all ages is not different from that of 1939, but the excess of females is confined to the higher ages.

Females per 100 Males

Mid-year	All Ages	Under 15	15–24	25–34	35–44	45–64	65 and over
1939	107	98	98	102	110	117	134
1954	107	96	98	100	103	113	150

Factors contributing to this change are the smaller war losses in 1939-45 as compared with those in 1914-18, and the reduction in the volume of predominantly male net emigration after the First World War. The rise in masculinity at birth, and the decline in child mortality which has resulted in a greater improvement in the number of males as compared with females surviving, have also played a part. The increase in the excess of females at ages 65 and over is due partly to the fact that the generations most depleted of males by the 1914-18 war losses and by the heavy emigration before 1914 have now moved into this age-group, and partly to the greater improvement in the longevity of females as compared with males.

Marital Condition

Estimates of the total population by marital condition are shown in Table A3. The proportion married in the total population rose between 1939 and 1954 from 48 to 53 per cent among males and from 45 to 49 per cent among females. At ages 25-29 the proportions married have risen from 54 to 65 per cent among males and from 65 to 79 per cent among females. This striking change is a consequence of the high marriage rates of post-war years and of a reduction in the average age at marriage, matters which are discussed in more detail in the Marriage chapter.

Estimates of married women by age and marriage duration are referred to in the Fertility chapter.

Local Populations

Estimates of the home population of all boroughs, urban and rural districts in England and Wales as at the middle of 1954 are shown in Tables 12 and E. The Appendices to Parts I and II give details of changes in boundary during the year.

The present estimates have been derived from those of the previous year and adjusted to take account of the final tabulations of the 1951 Census. They differ in character from the census figures of enumerated population, since they relate to the population usually resident in each area. The nature of this difference, and the method of allowing for it, are discussed in the 1952 Text Volume, page 11.

The main element of population change from one year to another in local areas is internal migration, i.e. movement between different areas within the country. Since the abolition of food rationing in 1954* the evidence consists chiefly of information provided by local authorities about new housing in each area, especially where the occupants are known to have come from a different area (e.g. in New Towns and certain housing estates), and of the changes in the registers of parliamentary electors compiled every year. In assessing the year's movement account is also taken of the natural increase or decrease, the changes in the number of non-civilians stationed in the various areas, and in critical cases of other sources of information.

There is an inevitable decline in the accuracy of estimates as they get further away from the last census, but fortunately the population change in the great majority of areas is so small in any one year that any errors are unlikely to reach serious proportions for a few years yet. A detailed examination of the errors which had accumulated before the 1951 Census was given in the Text for 1951 (pages 14-17). The corresponding comparison after the 1931 Census is discussed in the Text for 1930 (pages 100-102).

Local Age Distributions

The estimates of the 1954 home population by sex and age in Standard Regions, Conurbations and Aggregates by Type of Area shown in Tables 2 and A4 have been derived from the final tabulations of the 1951 Census. They therefore take account of more accurate information than those for previous years.

The estimates of the number of children under 15 years of age in Administrative Counties, County and Metropolitan Boroughs as at mid-1954 have been published in the Registrar General's Quarterly Return No. 425 (1st Quarter of 1955), page 28. They are mostly based, for children under 5, on the number of births in each area in the preceding 5 years, and for those aged 5-14, on the number of children of those ages on school registers, figures of which have been made available by the Ministry of Education. Both kinds of data are adjusted in the light of the relationship of corresponding data for 1951 to the mid-1951 estimates of these age-groups based on the final census results.

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*The last mass re-issue of food ration books was made in the spring of 1953.

BIRTHS, FERTILITY AND REPRODUCTIVITY

Live Births

The number of live births occurring in 1954 numbered 673,651, compared with 684,372 in 1953. Until 1938 statistics of birth registrations only were available but in most years the numbers of occurrences and of registrations were not different for all practical purposes and the registrations of 1938, numbering 621,204, may be safely compared with the occurrences of 1954. The births of 1954 represented a rate per 1,000 population of all ages of 15·1, compared with 15·4 in 1953 and 15·1 in 1938 (Tables B and C of Part II). The 1954 rate, after a slight upward fluctuation in 1953, continues the persistent though very gradual downward trend which followed the violent movement of the war and immediate post-war years.

A similar situation exists in many other countries as is shown by Table Q, which compares the rates of European and some other countries since 1919. In most of the countries for which statistics are shown the birth rates are slowly declining; only in the United States and Canada is there a persistent rise in the birth rate, and only in Scotland, Ireland, Norway, Spain, Australia, New Zealand and South Africa is there an apparent resistance to the downward trend in the sense that the rates appear to be fluctuating about a stationary level. Table Q only covers the more developed countries of the world from which birth registration statistics are available; it takes no account of the very high numbers of births which are constantly adding to the vast populations of China, India and other parts of Asia.

Crude birth rates, however, do not permit a true appreciation of current fertility trends and levels for reasons which are explained below and they should be regarded as only approximate guides.

Birth Rates per 1,000 Women aged 15 to 44

Since only a fraction of the population is capable of childbearing, it seems more appropriate to relate births not to the total population but to the childbearing components only, for this purpose assumed to be women of ages 15 to 44. The proportion of these women in the total population has been decreasing for many years, and the crude birth rate has therefore been progressively reduced by the inclusion in the denominator of an increasing proportion of the population not at risk of childbearing.

Table III gives live birth rates per 1,000 women aged 15-44 and the ratios of these rates to that of 1938. In census years the ratio standardised for age is also shown, i.e. after correcting for changes in age structure of women *within* the age-group 15-44, though this is an unimportant correction and has little effect on the ratios.

Table III.—Live Birth Rates per 1,000 Women aged 15-44; 1841 to 1954, England and Wales

Year	Live births per 1,000 women aged 15–44	Ratio to 1938 (taken as 100)		Year	Live births per 1,000 women aged 15–44	Ratio to 1938 (taken as 100)
		Direct (Unstandardised)	Standardised for age			
Long Range (3 year averages)				Individual Years or Annual Average		
1841 ..	148·3	238	—	1938 ..	62·2	100
1851 ..	149·8	241	—	1939–49 ..	71·5	115
1861 ..	151·1	243	—			
1871 ..	155·7	250	—			
1881 ..	147·7	238	235			
1891 ..	129·8	209	205			
1901 ..	114·8	185	179	1950 ..	73·0	117
1911 ..	98·3	158	155	1951 ..	71·6	115
1921 ..	90·9	146	147	1952 ..	71·8	115
1931 ..	64·3	104	102	1953 ..	73·5	118
1951 ..	72·1	116	117	1954 ..	72·9	117

In the left-hand side of the table, giving rates for the average of three years about each census year since 1841, the highest rate is associated with 1871, a rate no less than two and a half times that of 1938. The rates then decline to 1931, when the rate was substantially the same as that of 1938. From the figures shown in Table III above, it would appear that the decline was first retarded in the decennium 1911-1921 but in fact this was due to the exceptionally high birth rate in 1921—the making good of postponed births after the war of 1914-18. The underlying trend was still downward.

After 1931 the rate declined slowly to 59·4 in 1933, or 95 per cent of the 1938 rate, and then rose slightly to 62·2 in 1938. The rise from 1933 to 1938 was itself small, but the change in trend was important coming as it did after such a prolonged decline; and it is believed that it marked a significant change in social attitude toward family building.

The intervention of war again in 1939 produced fluctuations in the rate, and the long-term trend has been made clearer by aggregating the experience of the war and post-war years to yield an average rate of 71·5 for the period 1939-1949 as a whole, or 15 per cent higher than the 1938 rate. Since 1950 the rate has fluctuated very little from an average of about 73, i.e. about 17 per cent above 1938. This provides a more favourable picture of current fertility than is afforded by crude birth rates.

Age Standardisation

A further refinement may be introduced into the analysis by recognising that the fertility of women varies with age in the reproductive age-group. Since only a small proportion of girls under 20 are married their birth rate is low, but otherwise the rates are higher at younger than at older ages. The ageing of the population has added weight to the older groups and has tended to reduce the average fertility of the age-group 15-44 taken as a whole.

The left-hand section of Table III, giving three year averages around census years, shows both unstandardised and standardised ratios of the rate to that of

1938. As at 1881 the effect of this standardisation was to reduce the ratio from 238 to 235 and, for 1931, from 104 to 102. At 1951, however, the effect was to increase the ratio, from 116 to 117. Thus the improvement from 1931 to 1951 is only 12 per cent as shown by the unstandardised ratio, but 15 per cent as shown by the standardised ratio. While these adjustments are shown for completeness it is nevertheless obvious that the general trend of the fertility rates is not affected to any significant extent by age standardisation.

Reproduction Rates

Unless in the long run deaths are replaced by births (or by an inward migration balance) the size of the population must change; and attention has become focused upon replacement, i.e. upon considering whether a generation of women in passing through the reproductive years of life might bear sufficient female babies to replace themselves and thus to enable the same cycle of replacement to continue.

A simple index can be obtained by calculating fertility rates based on female births at each age (in practice in five-year groups) and adding these together to estimate the average number of female babies born to women passing through the reproductive ages assuming they experience these fertility rates—this is called the Gross Reproduction Rate (G.R.R.). It takes no account of the mortality of infants before they themselves attain the age of the mothers they are supposed to replace. Therefore before the rates for each age-group are added together they should each be multiplied by the appropriate proportion of infants surviving to that age-group. If this calculation is made on the basis of current mortality experience, it yields the Net Reproduction Rate (N.R.R.).

These reproduction rates suffer from a number of statistical defects but there is an overriding difficulty of interpretation which has tended to bring them into disrepute. Exact replacement is only indicated if rates of unity are consistently yielded and if the assumed conditions of mortality and age variations in fertility are reproduced in the future. In turn this involves other assumptions of stability in marriage experience, in the sex ratio at birth and birth spacing. These conditions are never fulfilled. The rate is a convenient method of summarising the experience of a single calendar year (and as such is not to be derided) but this is an experience to which a number of separate generations of women contribute and, in so far as these generations are already at different stages in their child-bearing career, the probable outcome in relation to the separate generations is obscured. Replacement cannot therefore be properly assessed by reproduction rates. Even a series of rates indicates only past trends and gives no reliable guide to the future in which rapid changes in conditions might take place. The rates are likely to undergo fluctuation from year to year and may even be subject to movement persisting over a period of years without providing a sure guide to ultimate population growth.

Approaches have been made to the problem of assessing replacement by measuring family sizes attained at different durations of marriage for couples married at different times in the past, or by calculating the ratio of successive generations. Though these are more satisfactory measures of replacement, they are by this same token retrospective measurements of past fertility in which current experience carries little weight.

Gross and Net Reproduction Rates for England and Wales are shown in Table IV.

Table IV.—Gross and Net Reproduction Rates, 1841 to 1954, England and Wales

Year	Reproduction Rates		Ratio of N.R.R. to G.R.R.	Year	Reproduction Rates		Ratio of N.R.R. to G.R.R.
	G.R.R.	N.R.R.			G.R.R.	N.R.R.	
3 year Averages				Single years (continued)			
1841	2·237	1·349	0·603	1940	0·850	0·753	0·886
1851	2·264	1·381	0·610	1941	0·836	0·737	0·882
1861	2.277	1·427	0·627	1942	0·934	0·845	0·905
1871	2·356	1·511	0·641	1943	0·985	0·893	0·907
1881	2·252	1·511	0·671	1944	1·089	0·993	0·912
1891	1·973	1·369	0·694	1945	0·992	0·910	0·917
1901	1·702	1·238	0·727	1946	1·200	1·112	0·927
Single years				1947	1·307	1·214	0·929
				1948	1·158	1·089	0·940
1911	1·424	1·118	0·785	1949	1·098	1·037	0·944
1922*	1·189	0·991	0·833	1950	1·062	1·010	0·951
1931	0·922	0·801	0·869	1951	1·044	0·996	0·954
				1952	1·052	1·008	0·958
1938	0·897	0·805	0·897	1953	1·076	1·032	0·959
1939	0·892	0·807	0·905	1954	1·071	1·031	0·963

* 1922 has been selected since, as the aftermath of the First World War, conditions in 1921 were abnormal.

It is perhaps best to regard these rates as having very much the same properties as annual birth rates and to consider them as such. The G.R.R. is superior to a crude birth rate since it relates births to the section of the population conventionally taken as responsible for them. Birth rates per 1,000 women aged 15-44, employed above, also possess this superiority, but the G.R.R. has a further advantage in that it is standardised for age. The N.R.R. has both these properties; in addition it incorporates an allowance for wastage by mortality between birth and prospective motherhood.

The G.R.R. in 1841 was 2·237 and nearly 150 per cent above that of 1938. The close agreement between this excess and that shown in Table III will be noted. The rate at that time was rising slowly and after passing a peak in 1871 commenced a long decline which was not arrested until after 1931, by which year it had fallen to 0·922. Between 1931 and 1938 there was little movement in the rate. The G.R.R. fluctuated widely in the next 11 years, as did more conventional birth rates, its average for the period 1939-49 being 1·031. Since 1950, like the birth rate per 1,000 women aged 15-44 discussed above, it has fluctuated first downward and then upward without departing a great deal from the average level for the period—in this case an average of about 1·06.

The introduction of the element of mortality which has improved so much has an important effect on the shape of the long-term changes. The N.R.R. in 1841 was 1·349, barely one half of the G.R.R. and only 68 per cent above the 1938 rate, showing that the contemporary high mortality losses between birth and attainment of reproductive ages were such that a much higher birth rate was required to replace the mothers of that time than was required in 1938. After 1841 the N.R.R. followed a course similar to that of the G.R.R., but with the rate of decline much retarded by the improving mortality. By 1931 the N.R.R. had fallen to 0·801, and in 1938 it was not significantly different at 0·805. The average N.R.R. for 1939-49 was 0·945. The rate was 0·996 in 1951, 1·008 in 1952, 1·032 in 1953 and 1·031 in 1954. The rate has now been above or close to unity since 1946.

It is interesting to note the effect of mortality improvement since 1938. The average G.R.R. for 1939-49 was 15 per cent above 1938 whilst the average N.R.R. was 17 per cent above 1938. In 1954 the G.R.R. was 19 per cent above the 1938 level and the N.R.R. 28 per cent above. Thus, the contribution of current births to the provision of potential mothers in the future, already increased by 19 per cent above that of 1938 by virtue of improvement in fertility rates, has been increased by a further 9 per cent as a result of the reduction in mortality wastage between birth and reproductive ages.

The last columns of the two halves of Table IV show the ratio of the N.R.R. to the G.R.R., an index of the changes in mortality wastage discussed above. In 1841 nearly 40 per cent of the reproductive potential of girls was lost by their premature death. At the turn of the century the loss was still over 25 per cent. In the next 30 years the loss was halved, falling from over 25 per cent to under 15. By 1938 the loss had been brought even lower to 10·3 per cent. Still further improvement in the following 16 years more than halved the losses again to 3·7 per cent in 1954. It can be seen that further gains from mortality can be but slight, since the losses which can be removed are so small.

Thus, whilst the mortality gains in the last hundred years have contributed much to maintaining replacement, little help can be expected in the future from this source, and another decline in fertility rates, such as that in the early years of this century, could not take place without damage to replacement prospects. However, judgment must be suspended: for, while the fertility decline from the post-war peak has left the N.R.R. still in the region of unity, it remains for the records of the next few years to reveal the true post-war trend. It has to be borne in mind that the very youngest generations involved in the reproduction rate were married at earlier ages than the older generations and that, to the extent that they will complete their family building earlier, they will have lower fertility rates at older ages than are assumed in the reproduction rate. This means that the reproduction rate has been temporarily inflated by earlier marriages and true replacement may turn out to be appreciably below unity.

For example, if the fertility rates (as given in Table EE) were arbitrarily modified to allow for this to the extent shown below, the net reproduction rate would be reduced to 0·95.

Fertility rates (female births) per thousand of females in age-group

	15–	20–	25–	30–	35–	40–	45–
Actual 1954	10·8	66·2	67·5	41·3	21·6	6·3	0·4
Hypothetically modified	10·8	65·0	65·0	36·0	17·0	3·0	0·0

This is not a forecast but an illustration of possible effects which are not foreshadowed in the reproduction rate.

It should be borne in mind that fertility indices however statistically refined are only measures of results and reveal nothing of causes. For fertility is affected by many social, economic, and physiological factors of which only the total effect is reflected in registration statistics without any indication of their separate influences.

Age, Duration and Parity

Owing to the complexity of tabulations involving identification of legitimacy, age of mother, duration of marriage, number of previous children and various combinations of those factors, it is not practicable or economical to provide

completely parallel classifications of both births and maternities. The tabulations provide full analyses by the two factors of legitimacy and mother's age for both births and maternities (Part II, Tables AA to FF and TT), but the legitimate fertility tabulations involving duration of marriage or number of previous children are restricted to maternities (Tables HH to OO and QQ). Maternities are slightly greater in number than the corresponding number of live births (stillbirths included in the former being in excess of the plural births excluded), but the excess is small and the maternity tabulations can be converted to live birth tabulations with sufficient accuracy for most purposes by the application of the appropriate live birth-maternity ratios. Ratios for 1938 to 1953 have been shown in previous commentaries, and for 1954 are shown below in Table V.

Table V.—Ratio of Legitimate Live Births to Legitimate Maternities by Age of Mother at Maternity, 1954, England and Wales

Calendar Year	Age of Mother at Maternity						
	All ages	Under 20	20–	25–	30–	35–	40 & over
1954 ..	0·989	0·987	0·990	0·992	0·991	0·984	0·964

Incomplete Statement at Registration

The records of successive years have been subject to varying degrees of incompleteness through the occasional failure to obtain at birth registration a record of the mother's age, duration of marriage, or the number of her previous children. The proportion of " not stated " cases of various types in the records for the year 1938, the first of the series, and for the years 1946 to 1954 are given in Table VI.

Table VI.—" Not Stated " cases per 10,000 total legitimate maternities, 1938 and 1946 to 1954, England and Wales*

Type of information " not stated"	1938	1946–50	1951	1952*	1953	1954
Age only	20	19	16	14	14	14
Age and duration	5	3	2	5	6	6
Age and children	—	—	—	—	—	—
Age, duration and children ..	25	9	6	—	—	—
Duration only	89	29	24	32	30	32
Children only	44	25	19	—	—	—
Duration and children	7	4	3	—	—	—
Total, all types	190	89	70	51	50	52
All age types	50	31	24	19	20	20
All duration types	125	45	35	37	36	38
All children types	76	38	28	—	—	—

* From 1952 onwards the comparisons relate to women married *once only*.

In 1938, the first year of the operation of the Population (Statistics) Act, the additional information required by that Act was deficient in 1·9 per cent of total registrations of legitimate births, but by 1951 the deficiency had fallen to 0·7 per cent. Restricting the tabulations from 1952 to women married once only can be seen to have had the effect of reducing the deficiency still further to about 0·5 per cent. The date of marriage, from which the duration of marriage is obtained, has been the most frequent item of information omitted but such omissions have become much less frequent, falling from 1·25 per cent legitimate maternities in 1938 to only about 0·4 per cent in recent years.

The number of previous children was omitted for 0·76 per cent of legitimate maternities in 1938, but the proportion had fallen to 0·28 in 1951 and since 1952 there were effectively no omissions for women married once only. The frequency of omissions of mother's age was 0·5 per cent in 1938, but only 0·24 in 1951 on the old tabulation basis and about 0·2 since 1952 on the new.

There is no reason to suppose that the omissions were generally intentional or prejudiced and therefore as already stated above it has been considered justifiable to incorporate in Tables AA, HH, II, LL and MM a proportional distribution of the " not stated " amongst the " stated " cases as being the more convenient form of presentation.

Illegitimate Births and Pre-marital Conceptions

Of the 673,651 live births which occurred in 1954, 31,609 or 4·7 per cent were registered as illegitimate compared with an average of 5·5 per cent in the post-war years from 1946 to 1950; an average of 6·2 per cent over the war period 1939-1945; and an average of 4·2 per cent in the pre-war years from 1935 to 1938. The proportion of births that were illegitimate, after having been stable for many years, rose during the war to some 50 per cent above the pre-war level. Since the war the proportion has declined, but in 1954 it was still 12 per cent above the pre-war figure.

The numbers of illegitimate births registered from 1851 are published in Table B of Part II and rates in Table C.

Attention has been drawn in previous commentaries to the fact that legitimate but pre-maritally conceived births and illegitimate births are complementary and should be considered together. Tabulations of legitimate births by duration of marriage are not made, but tabulations of maternities are available and enable the necessary statistical analysis to be carried out. From 1952 onwards the number of maternities occurring within 9 months of marriage are taken to indicate the number pre-maritally conceived. Prior to 1952 for convenience of tabulation it was considered permissible to take the dividing line at approximately $8\frac{1}{2}$ months.

Table VII shows the numbers of illegitimate and pre-maritally conceived maternities for each year from 1938 (when tabulations by duration of marriage were first made) to 1954. As an indication of the effect of the change in duration tabulation in 1952 it may be stated that on the new basis the 1951 percentage in column (5) would be raised from 12·3 to 13·0 by the addition of one half month's maternities.

Table VII.—Illegitimate maternities and pre-maritally conceived legitimate maternities, 1938 to 1954, England and Wales

Year	Illegitimate maternities	Pre-maritally conceived legitimate maternities	Total maternities conceived extra-maritally		Percentage of extra-maritally conceived maternities legitimated by marriage of parents before birth of child
			Numbers	Percentage of all maternities	
(1)	(2)	(3)	(4)	(5)	(6)
1938	27,440	64,530	91,970	14·4	70·2
1939	26,569	60,346	86,915	13·8	69·4
1940	26,574	56,644	83,218	13·7	68·1
1941	32,179	43,363	75,542	12·7	57·4
1942	37,597	40,705	78,302	11·8	52·0
1943	44,881	37,271	82,152	11·8	45·4
1944	56,477	37,746	94,223	12·3	40·1
1945	64,743	38,176	102,919	14·9	37·1
1946	55,138	43,488	98,626	11·8	44·1
1947	47,491	59,633	107,124	12·0	55·7
1948	42,402	62,304	104,706	13·4	59·5
1949	37,554	59,185	96,739	13·1	61·2
1950	35,816	54,188	90,004	12·8	60·2
1951	33,444	50,477	83,921	12·3	60·1
1952	33,088	* 50,740	83,828	12·3	60·5
1953	33,083	50,266	83,349	12·1	60·3
1954	32,128	50,901	83,029	12·2	61·3

* From 1952 onwards the figures relate to women married *once only*.

It has been pointed out in previous commentaries that, as the incidence of illegitimate maternities increased at the onset of war [shown in column (2) of the table], the incidence of pre-maritally conceived legitimate maternities decreased [shown in column (3)], and the sum of the two [shown in column (4)] suffered much less fluctuation than either of its components. It is likely that physical separation and other disturbances of the war prevented or militated against the marriage of the couple after conception but before the birth, and produced an apparent shift of a substantial number of maternities from the pre-maritally conceived legitimate category to the illegitimate category during war and immediate post-war years. It therefore seemed reasonable to expect that, when war conditions passed, a return would be made to the pre-war pattern. From column (6), which shows the proportion of extra-marital conceptions followed by the marriage of the parents before the birth of the child, it may be seen, however, that the proportion was steady at 70 per cent before the war, and that after the war-time disturbance had passed it settled in 1948 at 60 per cent. It was shown in the Text for 1951, page 27, that this difference in levels was mainly due to considerable reductions in the proportions legitimated at ages above 20, especially at ages 25-34.

Extra-maritally conceived maternities related to the population at risk, viz : unmarried females together with the mothers of legitimately born children conceived before marriage, are shown in Table VIII with distinction of age of mother. To facilitate the comparison of the 1952 rates with those of previous

years an additional column for 1951 has been provided showing the rates that would have been produced in that year if the duration tabulations had been on the revised basis adopted in 1952.

Table VIII.—Extra-maritally conceived maternities per 1,000 unmarried females (*see text*), 1938 to 1954, England and Wales

Age of Mother	1938	1939	1940–45 Average	1946–50 Average	1951	1951* (Adjusted)	1952	1953	1954
15–	12·0	12·1	11·1	13·8	14·6	15·0	15·1	15·6	16·1
20–	37·1	35·6	36·5	46·9	42·8	46·3	46·4	47·8	50·1
25–	27·6	26·6	34·5	45·1	38·7	41·6	39·1	39·2	38·6
30–	16·0	15·8	23·2	33·0	30·6	32·1	28·5	29·6	28·8
35–	10·6	10·0	13·0	18·2	17·0	17·5	16·2	16·0	16·5
40–	4·2	4·0	5·2	5·9	5·7	5·8	5·3	5·4	5·5
15–44	19·8	19·0	20·8	26·8	24·7	26·2	25·4	25·8	26·3
Ratio to 1938:									
Crude	1·00	0·96	1·05	1·35	1·25	1·32	1·28	1·30	1·33
Standardised by age	1·00	0·98	1·07	1·38	1·29	1·36	1·33	1·39	1·40

* Adjusted on 1952 duration basis.

The highest rates are for women aged 20-24 and 25-29. Before the war the highest rate was clearly that of the 20-24 age-group, but in the war and the immediate post-war years the difference between this and the succeeding age-group narrowed considerably. Recent years have seen a gradual return to the pre-war relationship between the two groups.

The increases in the rates at ages over 30 as compared with 1938, although considerable, are not as important from the point of view of the resulting increase in the numbers of extra-maritally conceived maternities as the much smaller increases at the younger ages, the assumed population at risk at ages over 30 being only some 25 per cent of the total aged 15-44.

It should be borne in mind that the population actually involved in the production of these extra-marital conceptions is not determined merely by age and marital condition. It is significant that the rates have risen as the proportions of unmarried persons in the younger age-groups of the population have fallen; and it may well be that the true population at risk is mainly a hard core of less responsible persons whose numbers are not closely related to the total size of the unmarried population, nor diminished by the high marriage incidence of recent years. To this extent the specific age rates are fallacious and greater emphasis should be placed upon actual numbers of extra-marital conceptions which have been gradually declining, both absolutely and in relation to total maternities.

Sixty-eight per cent of the illegitimate and 95 per cent of the legitimate extra-marital maternities in 1954, i.e. a total of 84 per cent of all extra-marital conceptions, related to mothers under the age of 30.

Legitimate Births and Fertility

Of the total live births which occurred in 1954, 642,042 were registered as legitimate, compared with 661,847, 644,758, 641,186 and 651,869 in the years 1950 to 1953 respectively, and 594,825 in the last pre-war year, 1938.

The purpose of this section, however, is not merely to confirm the broad trend of fertility, already indicated in earlier paragraphs, but to draw attention to the salient features of fertility experience which are relevant only to married women and for whom alone the essential statistics are available. It is important to emphasize that too much should not be read into the apparent stabilisation of the annual number of legitimate live births above that of 1938, since there have been sharp and non-recurring changes in the associated population at risk in consequence of changes in marriage experience.

It is customary to relate childbearing to women of ages 15-44, and legitimate births to the married women within these ages. Owing to the persistence of high marriage rates to which attention is drawn in the marriage section of this commentary, the number of married women aged 15-44 in the population is higher than ever before, although the number of women of all marital conditions of these ages has been declining, as the following summary statement shows :

Women enumerated aged 15–44

	All marital conditions (thousands)	Married (thousands)	Proportion married (per cent)
1931 Census	9,825	4,917	50
1951 Census	9,486	6,135	65

Thus the current legitimate live birth experience, when related to the number of married women at risk, as in the following statement extracted from Table C of Part II, compares less favourably with similar rates for the pre-war period than do rates based upon all births and all women without regard to marital condition.

	1938	1946–50 Average	1951	1952	1953	1954
Legitimate live birth rate per 1,000 married women aged 15–44 ..	110·0	122·5	105·4	104·5	106·3	104·8

The rate, though recently declining more slowly than immediately after the peak year of 1947, has nevertheless fallen below the level of 1938. The average rate for 1951-54 was 4·5 per cent below that of 1938.

The analysis of legitimate fertility must take account of differences in birth rates of women of different ages (within the range 15-44) and of different durations of marriage.

Despite the fact that generations of girls moving up into the reproductive age-group are smaller than formerly (as a result of the fall in fertility in earlier years) their higher marriage rates have replenished the *married* population at these ages by numbers exceeding the loss from the larger generations passing out of the age-group at upper extreme of age. Any comparison of current fertility with that of earlier years must therefore take into account the facts that married women within the reproductive age-group are, as a group, younger than formerly; and that, owing to the reduction in the average age at marriage, married women of any particular attained age have been on the average married longer than their

predecessors. Of these two factors the first tends to elevate, and the second to lower, the crude fertility rate; and since the durational influence is the more powerful, the net effect is slightly to depress the crude rate. This rate based on legitimate live births to all married women aged 15-44 was 104·8 per 1,000 in 1954 and even though slightly depressed by recent marriage experience was not below the level established in the last few years.

Legitimate Fertility by Age of Mother and Duration of Marriage

Fertility declines with advancing age of mother and also with lengthening duration of marriage, and for proper comparisons between the fertility experiences of successive years it is important, notwithstanding the limited value of approximate summary measures such as total fertility rates or reproduction rates, to look closely at fertility rates related to specific age and duration groups. Such rates for 1952 to 1954 are summarised in Table IX.

Legitimate maternities at successive marriage durations are classified by individual ages of the mother in Table OO of Part II of each year up to 1951 and from 1952 in Table II, which refers to women married once only. The corresponding maternities of all married women for 1938-1945 were shown in Table IV of Appendix I on page 168 of the 1940-45 Civil Text, for 1946-1950 in Table 4 of Appendix II on page 188 of the 1946-50 Civil Text, and for 1951 in Table 3 of Appendix B on page 300 of the 1951 Text. These Appendix tables have the " not stated " element (shown separately in Table OO) rateably distributed.

Annual rates corresponding to the maternities are shown in Table KK and have been obtained by relating them to the estimated years of married life exposed to risk, shown in Table JJ. Similar annual rates (subject to tabulation changes) for 1938-1945 appeared in Table V of Appendix I on page 172 of the 1940-45 Civil Text, for 1946-1950 in Table 5 of Appendix II on page 192 of the 1946-50 Civil Text, and for 1951 in Table 4 of Appendix B on page 300 of the 1951 Text. It should be noted that a maternity rate expressed per year of married life may be regarded as equivalent to the annual rate per married woman. The rates shown are maternity rates and to obtain equivalent birth rates they should be multiplied by the appropriate ratios of births to maternities.

The rates for 1954 conform generally to the pattern of earlier years. At each duration the rates decline, more or less consistently, with increasing age of mother; and, at each age of mother, after rising to a maximum in the second year of marriage (except in those under age 20 where pre-marital conceptions are relatively more numerous), they decline with lengthening duration of marriage.

The rates at durations under 9 months, conventionally attributed to pre-marital conceptions, share with those at other durations the property of declining with age. The decline from the rate for mothers under age 20 to that of the next older group 20-24 is very steep, the latter rate being only some 40 per cent of the former, but thereafter the decline continues more gradually.

Table IX shows that the relative stability in the total rates applies also to rates specific for age and duration. (The rates at durations 2 and 3 years for women under 20 are based upon very small numbers and are subject to large chance fluctuations from year to year without any other significance.) The contrast between stable specific fertility rates and a falling crude birth rate is a reflection of the changes in the age structure of the population to which reference has already been made.

Table IX.—Legitimate maternity rates for women married once only by age and duration, 1952 to 1954, England and Wales*

Age of Married Woman	Year	Marriage Duration (completed years)										
		All Durations	0–	1–	2–	3–	4–	5–9	10–14	15–19	20–24	25 and over
All Ages under 50	1952	·088	·279	·261	·220	·194	·171	·113	·049	·019	·007	·001
	1953	·090	·280	·264	·227	·208	·181	·118	·049	·019	·007	·001
	1954	·089	·282	·257	·222	·207	·185	·116	·047	·019	·006	·001
Under 20 ..	1952	·420	·472	·328	·321	·251	—	—	—	—	—	—
	1953	·432	·476	·333	·372	·442	—	—	—	—	—	—
	1954	·423	·465	·330	·361	·430	—	—	—	—	—	—
20–24	1952	·252	·277	·283	·247	·227	·212	·189	—	—	—	—
	1953	·258	·271	·284	·254	·244	·226	·210	—	—	—	—
	1954	·254	·272	·274	·245	·242	·229	·214	—	—	—	—
25–29	1952	·167	·233	·246	·212	·194	·178	·137	·110	—	—	—
	1953	·174	·236	·252	·219	·209	·186	·143	·121	—	—	—
	1954	·171	·237	·244	·216	·206	·192	·141	·112	—	—	—
30–34	1952	·101	·223	·238	·201	·177	·156	·107	·070	·073	—	—
	1953	·102	·229	·238	·199	·187	·166	·109	·070	·073	—	—
	1954	·099	·233	·232	·198	·182	·168	·107	·066	·072	—	—
35–39	1952	·050	·164	·179	·148	·129	·121	·077	·043	·036	·043	—
	1953	·050	·162	·180	·151	·132	·124	·081	·042	·036	·044	—
	1954	·049	·176	·185	·141	·136	·123	·078	·041	·035	·042	—
40–44	1952	·015	·051	·067	·057	·045	·042	·027	·017	·012	·012	·011
	1953	·015	·052	·061	·052	·049	·040	·030	·017	·012	·012	·011
	1954	·015	·057	·066	·053	·054	·041	·030	·017	·012	·011	·011
45–49	1952	·001	·006	·003	·004	·004	·003	·003	·002	·001	·001	·001
	1953	·001	·005	·004	·004	·002	·005	·002	·001	·001	·001	·001
	1954	·001	·003	·004	·003	·003	·003	·002	·001	·001	·001	·001

* In calculating these rates the few maternities to women whose stated age and marriage duration implied an age at marriage below the legal minimum of 16 have been excluded. This has involved slight revisions of rates for 1952 and 1953 at the longer durations in each age-group, previously published in Table KK for those years.

Cohort Analysis

In considering replacement, the total ultimate size of family produced by each married woman is of more interest than the rate at which she may be building her family at any particular time. Maternity rates may be calculated each year and aggregated from year to year to show the average total number of maternities experienced by married women over the whole of various durations of marriage, i.e. effectively to trace their family building as they pass through their reproductive married lives.

It will be clear that the maternity rates in 1946 at duration 0- at maternal age 20-24, and in 1947 at duration 1- and age 21-25, are both related to women married at about the same time and at the same ages, i.e. they belong to the same marriage cohort† and they may be aggregated to show the average number of maternities experienced by the cohort by the end of the second year of married life. Similarly, the maternity rate in 1948 at duration 2- and age 22-26 may be added to the previous total to bring it up to the end of the third year of married life, and so on. If, in place of maternity rates, rates based on legitimate liveborn children are used and are added to base-line data provided by census material, estimates are obtained of the family sizes (ignoring the factor of survival) at different durations of marriage and different attained ages of the various marriage cohorts who make up the current population of married women.

†The term cohort is used for convenience to refer to women married during the same period of time.

Such estimates are shown in Table PP of the Statistical Review, Part II. The original base for this table was derived from the results of the Sample Family Census, 1946, carried out by the Royal Commission on Population* to which have been added registration statistics to the end of 1954. In order to focus attention on the marriage cohorts, the table is presented in a form which relates the family building to the women married in particular age-groups and particular calendar years. It should be emphasized that these families are not, except for the older cohorts, complete; additions are still being made to those of the earliest cohorts and the table merely shows the average size attained by the end of 1954.

The following statement† provides a comparison of average family sizes at corresponding durations, derived partly from the Family Census of 1946 and partly from Table PP.

Average number of liveborn children

	Marriage duration (completed years)								
	5 years						9 years		
Year of Marriage	1930	1940	1943	1947	1948	1949	1930	1940	1945
Age at marriage:									
Under 20	1·69	1·27	1·43	1·65	1·70	1·72	2·31	2·00	2·10
20–24	1·29	1·04	1·22	1·40	1·35	1·32	1·79	1·61	1·79
25–29	0·97	0·92	1·13	1·31	1·25	1·21	1·41	1·39	1·63
30–34	0·88	0·86	0·96	1·09	1·07	1·10	1·09	1·15	1·31
35–39	0·62	0·53	0·59	0·69	0·67	0·69	0·67	0·61	0·73
40–44	0·25	0·23	0·22	0·29	0·28	0·27	0·27	0·24	0·26

From this selection of the available figures it can be seen that the cohort of women married in 1930 at ages under 20 had an average of 1·69 live births after 5 years of married life and 2·31 after 9 years. Those married at the same ages at the beginning of the war and subject to considerable war-time separation had only 1·27 live births after 5 years, but after 9 years they had an average family size of 2·00, having made up that part of the gap between the two cohorts represented by births postponed by the war (though a large gap remains which may represent a more permanent characteristic of the young marriages of the war years). For the cohorts married at ages 20-29, this later recovery is even more noticeable.

The 1945 cohort after 9 years of marriage had outstripped the family sizes of earlier cohorts for ages at marriage above 25 years, but for earlier marriage ages their attained family sizes, though higher than those of the 1940 cohort, were smaller than those of the 1930 cohort, whose corresponding years of marriage entirely preceded the war and were free from the factors of separation and other war conditions which affected the later cohorts.

*Papers of the Royal Commission on Population, Volume VI—" The Trend and Pattern of Fertility in Great Britain. A Report on the Family Census of 1946 " by D. V. Glass and E. Grebenik, H.M.S.O., 1954, price £3. 10s. net.

†These are unpublished figures relating to England and Wales; corresponding figures published in the 1952 Text related to Great Britain and had not been adjusted to the durational basis of Table PP.

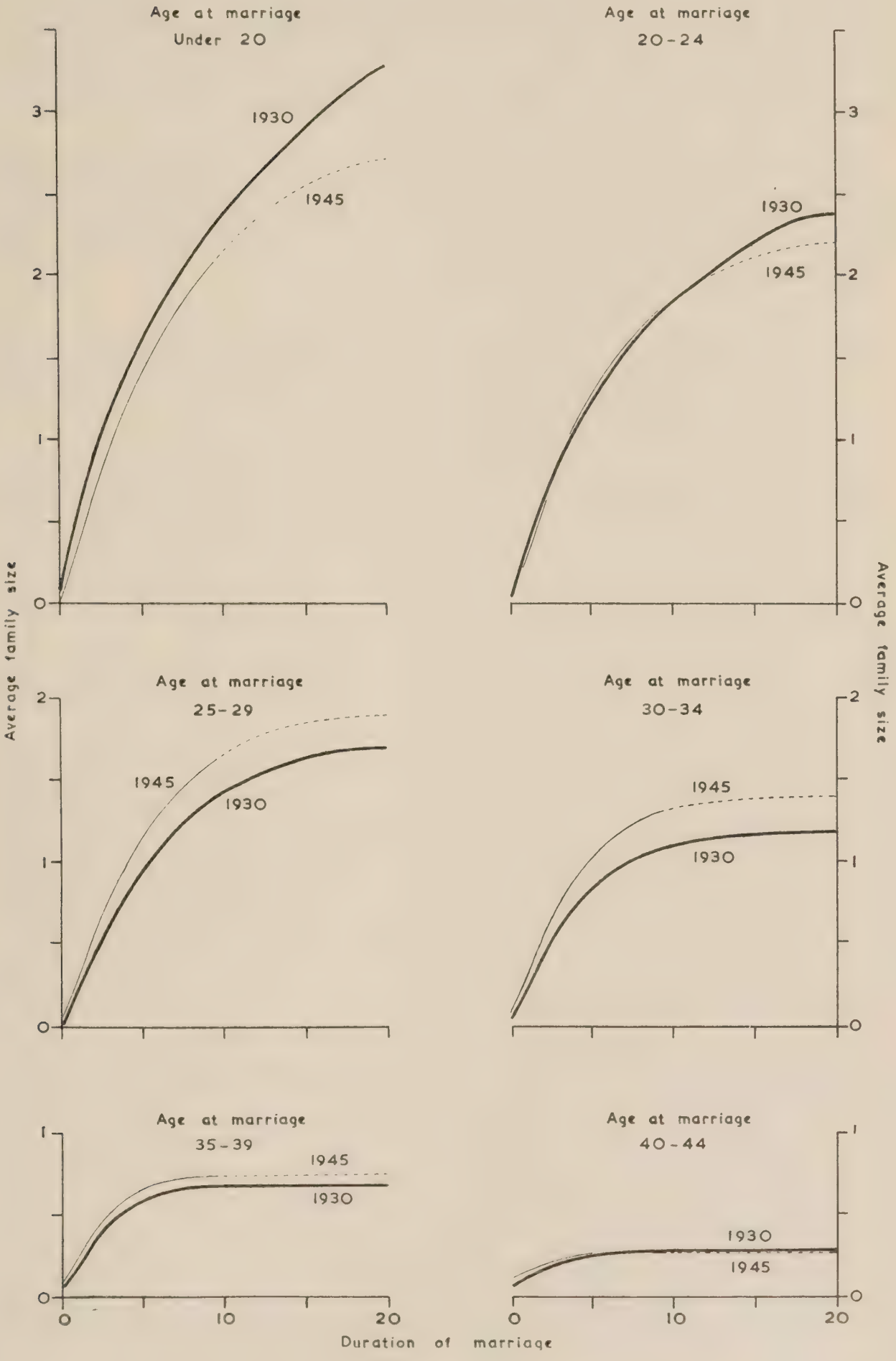
The latest cohorts shown, those married in 1948 and 1949, have average family sizes in excess of those produced after 5 years by women married in 1930. The ultimate family size of these post-war cohorts will not be known for several years yet, but it is probable that after 5 years duration the 1948 and 1949 cohorts, freed from war disturbances and subject to the tendency to complete family building in the early years of married life, have completed a greater proportion of their total family building than the war-time cohorts, and that an increase in family size as compared with earlier cohorts will not be maintained at later durations.

Diagram 1 shows the average number of live births produced at successive durations of marriage by women married at different ages in 1930 and 1945. The figures have been taken partly from the Family Census of 1946 (first marriages unbroken before the end of the reproductive period or the Family Census whichever earlier) and partly from Table PP in recent years (women married once only). After 9 years of marriage the average family sizes were as follows:—

Age at marriage	Average family size at 9 completed years of marriage		Projected ultimate family size of 1945 cohort
	marriages of 1930	marriages of 1945	
Under 20 ..	2·31	2·10	2·70
20–24 ..	1·79	1·79	2·20
25–29 ..	1·41	1·63	1·90
30–34 ..	1·09	1·31	1·40
35–39 ..	0·67	0·73	0·73
40–44 ..	0·27	0·26	0·26

The final column shows the ultimate family size which each group might perhaps be expected to attain on the assumption that the 1945 cohort curves, as shown by the dotted line in the diagram, reach their maxima much more quickly than those of the 1930 cohort (as recent experience suggests is likely); if these values are combined with the mortality and marriage rates likely to be experienced in the future, with allowance for illegitimate fertility, a cohort replacement rate of about 95 per cent (in round figures) is obtained. The shortfall from replacement in recent years may be regarded as of the order of 5 per cent. It will become greater than this if specific fertility rates fall, of which there is as yet little sign.

Diagram 1.—Average Family Size (Live Births per Married Woman) First Marriages of 1930 and 1945



First Maternities (Legitimate)

Of the 629,495 legitimate maternities to women married once only, in 1954 248,169 or 39·4 per cent were first maternities. The records for previous years include some women married more than once and are not strictly comparable, but on the basis of the experience of all women the proportion was 42·9 per cent in 1938. After the decline in the war years, the proportion rose to a peak of 45·4 per cent in 1947 when birth incidence was at a maximum and thereafter declined, and since 1950 the proportion has remained stable at about 39 per cent.

Family building tends to be concentrated in the few years immediately after marriage and the concentration will necessarily be accentuated when consideration is confined to first births or maternities. The extent of this concentration may be seen from Table X showing the numbers and distribution of first legitimate maternities by duration of marriage.

Table X.—Numbers and Distribution by Duration of Marriage of First Maternities (of current marriage) to married women of all ages, 1938 to 1954, England and Wales

Calendar Year	Duration of Marriage*												All Durations
	0–8½ mths.	8½–11½ mths.	1– year	2– years	3– years	4– years	5– years	6– years	7– years	8– years	9– years	10+ years	
	Numbers (hundreds)												
1938 ..	63,2	32,0	70,6	35,4	21,7	13,5	8,0	5,3	3,6	2,7	1,8	4,1	261,9
1939–49† ..	48,3	37,3	80,7	40,1	25,1	17,7	13,0	9,6	6,4	4,2	2,9	6,5	291,8
1950 ..	53,5	37,5	77,3	36,8	19,8	12,2	6,7	3,9	3,4	3,3	2,6	5,6	262,6
1951 ..	49,9	35,4	73,6	35,0	21,6	12,7	7,9	4,4	2,4	2,3	2,2	5,3	252,7
1952‡ ..	50,1	34,3	67,0	34,5	21,5	13,9	8,4	5,5	3,0	1,8	1,7	5,7	247,4
1953 ..	49,6	33,3	66,6	36,6	22,7	14,7	9,5	5,9	3,8	2,1	1,4	5,3	251,5
1954 ..	50,2	33,3	63,2	34,9	22,7	14,6	9,7	6,5	4,1	2,8	1,6	4,6	248,2
	Distribution per 1,000 total												
1938 ..	241	122	269	135	83	52	31	20	14	10	7	16	1,000
1939–49 ..	165	128	277	137	86	61	45	33	22	14	10	22	1,000
1950 ..	204	143	294	140	75	46	26	15	13	13	10	21	1,000
1951 ..	198	140	291	139	85	50	31	17	10	9	9	21	1,000
1952 ..	203	139	270	140	87	56	34	22	12	7	7	23	1,000
1953 ..	198	132	265	146	90	58	38	23	15	8	6	21	1,000
1954 ..	202	134	255	141	92	59	39	26	17	11	6	18	1,000

* Durations 1– year, 2– years, etc., are more correctly 11½ months–1 year 11½ months, 1 year 11½ months–2 years 11½ months, etc., prior to 1952; from 1952 onwards the earlier durations are 0–, 9– months.

† Annual average.

‡ From 1952 onwards first maternities to women married once only; not strictly comparable with earlier figures owing to the duration shift of ½ month.

From the lower part of the table it may be seen that about three quarters of first births are in the first three years of marriage: 76·7 per cent in 1938; 77·0 per cent in 1951; 75·2 per cent in 1952; 74·1 per cent in 1953, and 73·2 per cent in 1954. Although these proportions are very similar in magnitude, an examination of their constituent parts shows a difference, namely, the decline since 1938 at durations under 8½ months (9 months in 1952 to 1954) conventionally associated with pre-marital conceptions. In 1938 these accounted for nearly a quarter of all first legitimate maternities and since 1950 the proportion has been about one fifth. Restricting consideration to later durations produces the distributions shown in the following statement. (To facilitate comparison between 1952 and the earlier years in the series a separate 1951 distribution figure is given adjusted to make an estimated allowance for the ½ month tabulation shift.)

Period	Duration of Marriage*										
	All durations over 8½ months (9 months in 1952 and 1953)	8½–11½ months (9–12 months in 1952 and 1953)	Years								
			1–	2–	3–	4–	5–	6–	7–	8–	9–	10+
1938 ..	1,000	161	355	178	109	68	40	27	18	14	9	21
1939–49 ..	1,000	153	331	165	103	73	53	40	26	17	12	27
1950 ..	1,000	179	370	176	95	58	32	19	16	16	12	27
1951 ..	1,000	174	363	173	106	63	39	22	12	11	11	26
1951 (Adjusted)	1,000	179	360	171	106	63	39	21	12	12	11	26
1952 ..	1,000	174	339	175	109	70	43	28	15	9	9	29
1953 ..	1,000	165	330	181	113	73	47	29	19	10	7	26
1954 ..	1,000	168	319	176	115	74	49	33	21	14	8	23

* From 1952 onwards the comparisons relate to women married *once only*.

The underlying tendency in the war and immediate post-war years to postpone births is clearly seen by the shift from shorter to longer durations in the distribution for 1939-49, as compared with the periods before and after. In 1952, 1953 and 1954 there is rather less concentration in the first two years of marriage than in 1950 and 1951.

Birth Occurrences and Registration Time Lag

The statutory period allowed for registration of either a live birth or a still-birth is 42 days and as a consequence there has generally been an appreciable time lag between the occurrence of a birth and its subsequent registration. In the past the time lag has been found to decrease markedly after the introduction of an incentive to register earlier, for example, by the dependence of the issue of food ration books and Family Allowances upon birth registration. Conversely, registration has become more tardy when such incentives have been removed or have become less compelling. In 1954 the average time lag between occurrence of a birth and registration was about eleven days.

The importance of time lags arises from their influence on the difference between the number of births registered in a period and the number occurring in that period. Occurrences are usually the more appropriate statistics for fertility measurement but registrations are available sooner. The difference between the two is influenced by the time lag in two ways. A difference will occur, even though the time lag be constant, if birth incidence is changing; and also, even though birth incidence be constant, if the time lag is changing. In practice both factors operate. The combined effect of these factors may be measured by the ratio of occurrences to registrations, and has been very small except in the unsettled conditions of 1940-41 as the following statement shows:—

Ratio of birth occurrences to registrations

1939	1940	1941	1942	1943	1944	1945	1946
0·992	0·972	0·986	0·996	1·002	1·009	0·992	1·001
1947	1948	1949	1950	1951	1952	1953	1954
0·993	0·998	0·999	1·008	0·997	1·001	1·004	1·002

Seasonal Incidence of Births

The pre-war incidence of legitimate live births followed a regular annual cycle with a maximum in the second quarter (corresponding to conceptions in the previous third quarter) and a minimum in the fourth quarter (corresponding to conceptions in the first quarter). Table XI shows the quarterly distribution in 1939, a typical pre-war year. The war disturbances, especially the sharp fluctuations in the birth rate, distorted this pattern, but the table shows that in 1951 and 1952 a return had been made to the seasonal periodicity of pre-war years. This is even more clearly the case in 1953 and 1954.

Table XI.—Ratio of Quarterly Births to Average Quarterly Births taken as 100: 1939 and 1946 to 1954, England and Wales

Period	Year									
	1939	1946	1947	1948	1949	1950	1951	1952	1953	1954
	Legitimate Live Births									
1st Quarter	99	86	109	105	102	104	103	102	100	102
2nd „	106	99	106	103	105	104	107	104	106	105
3rd „	101	105	97	99	100	98	99	100	101	99
4th „	94	110	88	93	93	94	91	94	93	94
Year	400	400	400	400	400	400	400	400	400	400
	Illegitimate Live Births									
1st Quarter	105	107	110	107	105	106	104	103	102	104
2nd „	107	110	108	109	106	107	109	107	108	107
3rd „	100	95	98	96	99	96	96	100	98	98
4th „	88	88	84	88	90	91	91	90	92	91
Year	400	400	400	400	400	400	400	400	400	400
	Legitimate Stillbirths									
1st Quarter	104	91	115	109	104	104	107	107	102	105
2nd „	104	99	105	102	105	104	103	102	106	102
3rd „	98	101	93	96	97	97	95	94	96	96
4th „	94	109	87	93	94	95	95	97	96	97
Year	400	400	400	400	400	400	400	400	400	400

The incidence of illegitimate births, like legitimate births, has a maximum in the second quarter and a minimum in the fourth quarter, but differs in that the periodicity is associated with a larger swing, and in that the births of the first quarter (corresponding to the previous second quarter conceptions) markedly exceed those of the third quarter (corresponding to the previous fourth quarter conceptions). Here also the 1953 and 1954 distribution resembles that of pre-war years.

Variations in the incidence of legitimate stillbirths are due to the combined effect of two factors, the seasonal incidence of all legitimate births, live and still, and seasonal variations in stillbirth rates, the former having the greater influence. Thus there is a strong tendency for the distribution to follow that of live births, but the effect of the generally higher stillbirth risk in winter months can be seen in a shift from the third to the first quarter as compared with live births.

Since 1938 tabulations of births by month of occurrence have been shown in Table YY of Part II up to 1951 and since 1952 in Table TT, and permit a closer study of the seasonal incidence of births. The length of calendar months varies, and therefore to allow for this Table XII is based on daily averages.

Table XII.—Relative Birth Incidence in Calendar Months, 1939, 1951 and 1954, England and Wales

Month of Occurrence	Ratio of monthly daily average to that of the calendar year taken as 1,000								
	Legitimate Live Births			Illegitimate Live Births			Legitimate Stillbirths		
	1939	1951	1954	1939	1951	1954	1939	1951	1954
January	980	1,005	997	1,076	982	1,042	1,043	1,036	1,051
February	995	1,041	1,055	1,041	1,071	1,073	1,045	1,115	1,094
March	1,041	1,076	1,066	1,080	1,098	1,064	1,078	1,119	1,055
April	1,073	1,076	1,050	1,046	1,111	1,047	1,068	1,059	1,084
May	1,078	1,084	1,078	1,138	1,117	1,089	1,060	1,058	1,003
June	1,043	1,057	1,024	1,044	1,061	1,069	1,002	977	973
July	1,025	1,016	1,002	1,038	1,011	1,021	984	968	1,005
August	985	968	956	960	919	919	972	935	930
September	1,004	973	984	969	938	983	963	908	935
October	939	892	947	859	869	900	938	931	944
November	914	882	920	853	870	894	932	944	938
December	927	936	927	898	957	906	917	954	995
Year	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

For legitimate live births, the table shows that in 1954 the daily average rose sharply up to March and remained high until May when the highest ratio was recorded. Thereafter a steep decline occurred, interrupted only by a minor rise in September. After reaching a minimum in November (below the annual daily average by 8 per cent) the rising phase commenced. This is the normal pattern.

The course of illegitimate live births exhibits the same features as that for legitimate live births, including the minor upward fluctuation in September, but the amplitude of the cycle is greater.

A comparison of the ratio shown in Table XII for legitimate stillbirths and live births shows the same general similarity as was indicated by the quarterly table, the higher stillbirth rates of the winter months exercising a perceptible influence.

Sex Ratio at Birth

In 1954 there were 1,059 male live births per 1,000 female live births. This ratio was the same as in the previous year.

The generally rising trend in the masculinity of births in the present century can be attributed to the continuous reduction of foetal mortality. Since abortion and stillbirth rates are known to be higher for males, the masculinity of live births will be lower than that of conceptions and reductions in abortion and stillbirth rates will produce increases in the masculinity of live births, although the sex ratio at conception may remain constant.

From Table XIII, which shows masculinity for live and stillbirths in both legitimate and illegitimate sections, it may be seen that the proportion of boys is consistently higher amongst stillbirths than live births, and this implies that stillbirth losses are greater for boys than girls. It will also be noticed that as the stillbirth rate has been reduced the sex mortality differential has also been reduced so that the masculinity of legitimate stillbirths has generally fallen since 1928-30.

Table XIII.—Male Births per 1,000 Female Births distinguishing Legitimacy and whether Live or Still, 1928 to 1954, England and Wales

Period	Legitimate Births			Illegitimate Births		
	Live	Still	Live and Still	Live	Still	Live and Still
1928–30 ..	1,044	1,231	1,051	1,037	1,280	1,049
1931–35 ..	1,051	1,207	1,057	1,044	1,153	1,049
1936–40 ..	1,054	1,183	1,059	1,050	1,117	1,054
1941–45 ..	1,061	1,158	1,064	1,074	1,173	1,078
1946-50 ..	1,061	1,169	1,063	1,056	1,238	1,061
1951 ..	1,060	1,179	1,062	1,060	1,277	1,066
1952 ..	1,054	1,149	1,056	1,066	1,194	1,070
1953 ..	1,059	1,118	1,060	1,062	1,273	1,068
1954 ..	1,059	1,087	1,060	1,059	1,232	1,063

Since the war years the further upward movement in masculinity of live births appears to have been arrested, and the ratio has stabilised at about 1·06 for both legitimate and illegitimate births.

Multiple Births

During 1954 there were 689,851 births (live and still) from 681,058 maternities, the excess of 8,793 being the additional children born in multiple births. Tables CC and DD of 1954 Part II give details of the 8,724 maternities with multiple births and show that 8,655 produced twins and 69 triplets, a total of 16,542 live and 975 stillborn children.

The frequencies of multiple maternities and births in the current year compared with the whole period since 1938 when the data was first tabulated are summarised as follows:—

	All Multiple		Twins		Triplets	
	1938–1953	1954	1938–1953	1954	1938–1953	1954
Multiple maternities* per 1,000 total maternities	12·40	12·81	12·29	12·71	0·108	0·101
Multiple births per 1,000 total births ..	24·60	25·39	24·27	25·09	0·320	0·300
Multiple live births per 1,000 liveborn children	23·77	24·56	23·46	24·26	0·298	0·300
Multiple stillbirths per 1,000 stillborn children	53·92	60·19	52·80	59·88	1·083	0·309

* A maternity is treated as multiple whether or not the children involved are live or stillborn.

Taking mothers of all ages together the frequency of a multiple maternity was 12·4 per 1,000 in 1938-1953 and 12·8 per 1,000 in 1954. Likewise 24·6 per 1,000 of children born in 1938-1953 were twins, triplets or quadruplets, and 25·4 per 1,000 in 1954, the proportion being about twice as great amongst stillborn children as amongst liveborn.

Birth Rates in Different Parts of the Country

The birth rates of individual administrative areas in 1954 are given in Tables 12 and E. They are summarised in Table XIV, which shows, for each standard region, conurbation and aggregate of areas by type, live birth rates and the ratio of the local to the national rate. In Table XV these rates are ranked in order of size.

Table XIV.—Birth Rates in Standard Regions, Conurbations and Aggregates of areas by type, 1954

(*All the ratios were calculated before rounding off the rates*)

Area	All Live Births				Ratio of proportion married among Females 15–44 to national proportion as at 1951 Census	Illegitimate Live Births	
	Crude Rate per 1,000 Home population	Adjusted Birth Rate	Ratio of Local to National Rate			Crude Rate per 1,000 Home population	Ratio of Local to National Rate
			Crude	Adjusted			
ENGLAND AND WALES ..	**15·2**	**15·2**	**1·00**	**1·00**	**1·00**	**0·71**	**1·00**
Regions and Conurbations:							
Northern	17·1	16·8	1·12	1·10	0·99	0·63	0·88
Tyneside Conurbation ..	*17·4*	*16·6*	*1·15*	*1·09*	*0·98*	*0·67*	*0·93*
Remainder of Northern ..	*17·0*	*17·0*	*1·12*	*1·12*	*1·00*	*0·61*	*0·86*
East and West Ridings ..	15·3	15·3	1·00	1·00	1·03	0·70	0·97
West Yorkshire Conurbation	*14·8*	*14·9*	*0·97*	*0·98*	*1·02*	*0·80*	*1·13*
Remainder of East and West Ridings	*15·6*	*15·5*	*1·03*	*1·02*	*1·04*	*0·62*	*0·87*
North Western	15·6	15·6	1·02	1·02	0·99	0·73	1·02
South East Lancashire Conurbation	*15·1*	*15·1*	*0·99*	*0·99*	*1·01*	*0·82*	*1·15*
Merseyside Conurbation ..	*18·9*	*17·9*	*1·24*	*1·18*	*0·92*	*0·91*	*1·27*
Remainder of North Western	*14·2*	*14·8*	*0·93*	*0·97*	*1·00*	*0·55*	*0·78*
North Midland	15·7	15·7	1·03	1·03	1·05	0·77	1·08
Midland	15·8	15·3	1·04	1·00	1·03	0·69	0·96
West Midlands Conurbation	*15·8*	*14·9*	*1·04*	*0·98*	*1·02*	*0·73*	*1·02*
Remainder of Midland ..	*15·7*	*15·7*	*1·03*	*1·03*	*1·03*	*0·65*	*0·91*
Eastern	15·5	16·0	1·02	1·05	1·02	0·76	1·07
London and South Eastern ..	14·0	13·4	0·92	0·88	0·97	0·75	1·05
Greater London	*14·0*	*13·0*	*0·92*	*0·86*	*0·97*	*0·75*	*1·05*
Remainder of South Eastern	*14·0*	*15·1*	*0·92*	*0·99*	*0·97*	*0·73*	*1·03*
Southern	15·4	16·2	1·01	1·06	1·00	0·81	1·13
South Western	14·8	15·7	0·97	1·03	1·00	0·67	0·94
Wales (including Monmouthshire)	15·5	15·8	1·02	1·04	0·99	0·54	0·76
Wales I (South East) ..	*15·8*	*15·6*	*1·04*	*1·03*	*1·01*	*0·50*	*0·70*
Wales II (Remainder) ..	*14·7*	*15·9*	*0·97*	*1·04*	*0·94*	*0·64*	*0·90*
Aggregates of areas by type:							
Conurbations	15·1	14·3	0·99	0·94	0·98	0·77	1·08
Areas outside Conurbations:							
Urban areas with populations of 100,000 and over	15·4	15·3	1·01	1·00	1·01	0·79	1·11
Urban areas with populations of 50,000 and under 100,000	15·1	15·1	0·99	0·99	1·01	0·77	1·08
Urban areas with populations under 50,000 ..	15·3	15·6	1·01	1·03	1·01	0·64	0·89
Rural Districts	15·4	16·4	1·01	1·08	1·01	0·61	0·85

Table XV.—Ranking Comparison of Birth Rates in Regions, Conurbations and Aggregates of areas by type, 1954*

(The rankings were assessed before rounding off the rates)

Area	All Live Births	
	Crude	Adjusted
Conurbations and Remainders of Regions		
Tyneside Conurbation	2	3
Remainder of Northern Region	3	2
West Yorkshire Conurbation	13	14
Remainder of East and West Ridings	8	11
South East Lancashire Conurbation	11	12
Merseyside Conurbation	1	1
Remainder of North Western Region	15	16
North Midland Region	7	9
West Midlands Conurbation	4	15
Remainder of Midland Region	6	7½
Eastern Region	9	5
Greater London	16	17
Remainder of South Eastern Region	17	13
Southern Region	10	4
South Western Region	12	7½
Wales I (South East)	5	10
Wales II (Remainder)	14	6
Aggregates of areas by type		
Conurbations	4½	5
Areas outside Conurbations		
Urban areas with populations of 100,000 or over	1	3
Urban areas with populations of 50,000–100,000	4½	4
Urban areas with populations of under 50,000	3	2
Rural Districts	2	1

*In accordance with the usual convention, ties are given the mean of the ranks in question; thus, where in the adjusted column two areas have equal rates which would rank them both seventh, they are given the rank of 7½ (the mean of 7 and 8) and the next area is ranked 9.

Area Comparability Factors

Comparisons of crude birth and death rates between local areas are not strictly valid since crude rates take no account of the varying composition of the population of the different areas by sex and age. In the case of death rates an approximate correction to allow for this has been made since 1934 by the use

of area comparability factors (A.C.Fs.) which are effectively indirect standardising factors. Corresponding factors for use with birth rates were introduced in 1949. The present series of A.C.Fs. are based on the sex and age composition of the population as determined by the 1951 Census. They are shown in Table 12 of Part I and Table E of Part II. Separate series of comparability factors have been calculated for births and deaths.

Effectively if P_x is the number of women in the population aged x to $x + 4$; and P is the total population of all ages and both sexes; f_x is the group fertility rate for ages x to $x + 4$; and accents indicate local area figures, national figures being unaccented, we require as an indirect standardising factor to adjust the crude local birth rate:

$$\frac{\Sigma f_x \, . \, P_x/P}{\Sigma f_x \, . \, P'_x/P'}$$

which, as it should be, is greater than unity if the local age structure is such that P_x'/P_x is relatively lower at the younger ages where fertility rates are higher, i.e. if the local population is relatively deficient of women at childbearing ages. But $\Sigma f_x.P_x/P$ is the persons all ages rate R for England and Wales, so the expression may be written $\frac{P'}{\Sigma (f_x/R) P'_x}$ a form which facilitates computation. Thus in accordance with this expression the procedure is as follows:

The childbearing component of the population of England and Wales, taken for this purpose as women aged 15 to 44, is separated into six five-year age-groups (viz, 15-19, 20-24, etc.). Group birth rates are then obtained by dividing the number of live births occurring to mothers in each age-group during the triennium 1950-52 by three times the corresponding 1951 Census population. The group rates are then each divided by a rate for persons of all ages, calculated on a similar basis to the group rates but using total live births and total population, to give a series of group weighting factors. To obtain the A.C.F. for any given area the 1951 Census female population in each of the six age-groups is multiplied by the appropriate weighting factor and the products accumulated. The total population of the area divided by the result gives the area comparability factor.

It should be kept in mind that the A.C.F. for any given area relates to the population of the area as defined by the boundaries existing at the time of the 1951 Census. Provided that in the meantime there are no changes in boundary or other population movement (e.g. special housing or New Town development) important enough to disturb appreciably the relative sex and age distribution of the population included, the A.C.F. will remain applicable until a new series of factors can be calculated on the basis of the next census. Where an area is affected by the special changes referred to, the A.C.F. will be recalculated on the basis of the most up to date knowledge of the movements involved.

To overcome the difficulty of the comparison of crude birth rates between different areas an approximate adjustment may be made by multiplying these rates by the A.C.Fs. The nature of this correction has to be borne in mind when interpreting the adjusted rates. The A.C.F. simply allows for the varying proportion of women of childbearing ages in the aggregate local population, but not for any other factors, e.g. the proportion of these women who are married. Adjustment for the latter is required if the object is to compare the fertility levels of married women in different areas. On the other hand, if the object is

to compare the birth increment to local populations, the proportion married is separately examined, amongst other things, as a possible source of birth variation after such variation (adjusted for age and sex) has been ascertained. For this purpose Table XIV includes a column showing the ratio of the proportion married among women aged 15 to 44 to the national proportion at the 1951 Census.

All Live Births

The Merseyside Conurbation has the highest rates among the regions, both crude and adjusted, while Greater London has the next to lowest crude rate and the lowest adjusted rate. But the relatively low crude rate of Wales II and the relatively high rate of the West Midlands Conurbation are both due to the peculiar sex and age structure of their populations; adjustment raises the ranking of the former from 14 to 6 and lowers that of the latter from 4 to 15. Similarly the ranking, after adjustment, of the Eastern Region is raised from 9 to 5; for the Remainder of the South Eastern Region from 17 to 13; the Southern Region from 10 to 4, and the South Western Region from 12 to $7\frac{1}{2}$; that of the Remainder of East and West Ridings is lowered from 8 to 11. No other large differences are effected by the adjustment.

It will be seen from Table XIV that neither the high birth rates of the Merseyside Conurbation and the Northern Region, nor the low birth rates in Greater London can be accounted for by differential marriage incidence since the proportion of the female population aged 15-44 who are married is not sufficiently different from that of England and Wales as a whole. In many other areas high marriage proportions do account for the excess of the birth rate above the national figure.

In the Aggregates of areas by type the crude rates do not vary greatly but the adjusted rates are roughly in reverse order of urbanisation, the rural districts having the highest and the conurbations the lowest rate. Differences in married proportions do not account for this gradient.

Illegitimate Live Births

Among the regions Wales I (South East) still has the lowest illegitimacy rate. High rates were experienced in the Merseyside, West Yorkshire, and South East Lancashire conurbations and in the Southern Region. In Merseyside the high rate is associated with a low proportion married in the total population.

In the Aggregates of areas by type illegitimacy was higher in the conurbations and large towns and lower in the small towns and rural districts.

Stillbirths

The registration of stillbirths in England and Wales began on 1st July, 1927, when the Births and Deaths Registration Act, 1926, came into operation. The Statistical Reviews, Part II, show numbers of stillbirths in England and Wales as a whole by quarters (Table D) and annually by sex and legitimacy (Table B). Table E1 gives annual totals of stillbirths for standard regions, conurbations, aggregates of areas by type, metropolitan and county boroughs and administrative counties, and Table E gives the same information for all county districts.

Under the Population (Statistics) Act, 1938, additional information has been collected at the registration of births, including stillbirths, and detailed tabulations of stillbirths by legitimacy and age of mother appear in the Fertility Analyses of the Annual Reviews, Part II.

The stillbirth rate has remained fairly stable since 1949, the figures for the individual years 1949-54 being 22·7, 22·6, 23·0, 22·7, 22·4, 23·5 (per thousand total live and stillbirths). The effects of multiple maternities, age of mother and birth order were amply discussed in the Civil Text for 1946-50, pages 141-144, where it was shown that the risk is much higher in multiple than in single births (especially at the younger ages of mother where the single birth risks are lower); is higher in male than in female births; increases with age of mother except at the youngest ages; and independently of age varies with parity, being highest at first births and lower at the second than at any other higher parity birth. Treatment of such aspects as these requires the provision of data for several years in order that the numbers should be sufficiently large to justify analysis. The statistics for 1951 to 1954 do not increase the available data to an extent justifying a fresh analysis and a few years must elapse before these topics can be profitably discussed again.

MARRIAGES

During 1954 there were 341,731 marriages registered in England and Wales. This compares with 344,998 marriages in 1953, and 349,308 in 1952.

In relation to the total population, of all ages and marital conditions, the experience of 1954 represents a rate of 15·4 persons marrying per 1,000 population compared with 15·6 in 1953, 18·1 in 1939-49, 17·6 in 1938 and 17·5 in 1937. The numbers of marriages and rates per 1,000 population for calendar years are given in serial form in Tables B and C of Part II and in Table D for calendar quarters. The figures for each year from 1936 to 1954 have been extracted from these tables and are shown in Table XVI, from which it may be seen that, in the post-war period, a peak was reached in 1947 with a rate of 18·6 persons marrying per 1,000 population. Thereafter, except for slight and shortlived resistance to the downward trend in 1951, a continuous decline ensued.

Table XVI.—Marriages and Marriage Rates, 1936 to 1954, England and Wales

Period	Number of Marriages (in thousands)					Persons Marrying per 1,000 Population (in the form of equivalent annual rates)				
	Year	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
1936	355	50	101	115	89	17·4	9·8	19·8	22·5	17·3
1937*	359	71	80	121	87	17·5	14·0	15·7	23·5	16·8
1938	362	52	102	117	91	17·6	10·3	19·9	22·4	17·5
1939–45*†	381	75	99	110	97	18·1	14·6	18·8	20·7	18·3
1946	386	78	101	110	97	18·0	14·8	19·0	20·4	17·9
1947	401	75	109	120	97	18·6	14·2	20·3	22·0	18·0
1948*	397	95	93	123	86	18·2	17·6	17·2	22·5	15·6
1949	375	82	96	114	83	17·1	15·1	17·5	20·7	15·1
1950	358	87	80	115	76	16·3	16·0	14·7	20·7	13·7
1951*	361	110	67	111	73	16·4	20·2	12·1	20·1	13·2
1952	349	107	69	103	70	15·8	19·4	12·7	18·6	12·6
1953	345	94	77	105	69	15·6	17·1	14·0	18·9	12·3
1954	342	96	74	105	67	15·4	17·6	13·5	18·7	12·0

* In the years so marked, Easter fell in the first quarter. During the years 1939 to 1945, Easter fell in the first quarter in 1940 only.

† Annual averages.

The high incidence of marriage extending over a fairly long period embracing the war years has tended to deplete the unmarried component of the population. It is to the latter—the population available for marriage—that marriages should be related, and in Table XVII a comparison is made between marriage rates based on the total population and those based on the unmarried population aged 15 and over of all ages, extracted from Table C of Part II.

Table XVII.—Marriage Rates per 1,000 Population of all ages and per 1,000 Unmarried* Population aged 15 and over by sex, 1938 to 1954, England and Wales

Period	Per 1,000 Population		Per 1,000 Unmarried Population aged 15 and over			
			Males		Females	
	Rate	Ratio to 1938 rate taken as 100	Rate	Ratio to 1938 rate taken as 100	Rate	Ratio to 1938 rate taken as 100
1938	17·6	100	61·2	100	47·8	100
1939–49†	18·1	103	68·8	112	53·0	111
1950	16·3	93	66·1	108	51·7	108
1951	16·4	93	69·2	113	52·1	109
1952	15·8	90	67·6	110	50·9	106
1953	15·6	89	67·2	110	50·6	106
1954	15·4	88	67·0	109	50·4	105

*Single, widowed and divorced.

† Annual averages.

The marriage rate in 1954 per 1,000 population of all ages was 1 per cent below that of 1953 and 12 per cent below that of 1938. In contrast, the rate in 1954 when related to the marriageable population was still 9 per cent above that of 1938 for males ; for females it was 5 per cent above that of 1938. Some decline from the high rates which had been maintained for so prolonged a period was expected. This decline in total marriage incidence, when properly related to the unmarried population, appears to have begun in 1952 but as yet has been slow and relatively small in extent ; and as will be seen later does not yet apply to the more important element of first marriages at young ages.

Marriage Analyses by Sex, Age, etc.

The marriage rates so far considered have taken no account of the ages at which the marriages took place nor of the previous marital condition of those who were married. The marriages by single years of age for each sex and condition are given in Table G of successive Parts II, and can be related to the annual estimates of the population by sex, age and marital condition. Marriage rates by sex and age, distinguishing first marriages from remarriages, are shown in Table XVIII.

Table XVIII.—Annual Marriage Rates per 1,000 Bachelors, Widowers and Divorced Men, Spinsters, Widows and Divorced Women, at each of several age periods, 1931 and 1938 to 1954, England and Wales

Year	Annual marriage rates per 1,000 in each age-group						Marriage rate per 1,000 population over 15 in each class	Ratio to corresponding rate for 1938 taken as 1,000	Marriage rate which would have resulted had the 1938 age rates been in operation	Ratio of actual marriage rate (col. 8) to rate in column (10) taken as 1,000
	15–	20–	25–	35–	45–	55 and over				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
					BACHELORS					
1931	3·2	72·6	141·3	49·8	16·3	5·5	56·0	864	65·0	862
1938	3·2	87·0	160·6	57·0	18·5	4·8	64·8	1,000	64·8	1,000
1939–49	6·5	112·3	160·0	62·2	21·0	5·1	71·4	1,102	63·1	1,132
1950	5·6	113·8	148·2	51·6	19·5	4·9	67·6	1,043	62·7	1,078
1951	6·2	125·7	152·1	52·3	19·7	5·3	71·4	1,102	62·3	1,146
1952	5·9	124·3	149·5	49·9	19·0	5·0	69·5	1,073	61·7	1,126
1953	6·2	130·3	146·0	47·9	17·5	5·1	69·5	1,073	61·0	1,139
1954	6·6	135·2	145·2	46·4	17·4	5·0	69·7	1,076	60·3	1,156
					WIDOWERS AND DIVORCED MEN					
1931	—	131·7	185·9	133·5	67·3	15·0	35·9	942	40·6	884
1938	—	153·6	219·8	152·6	79·1	15·9	38·1	1,000	38·1	1,000
1939–49	—	187·9	341·5	207·6	105·0	17·6	49·5	1,299	37·8	1,310
1950	—	431·0	415·7	242·5	118·6	18·1	58·2	1,528	39·2	1,485
1951	—	320·0	385·7	231·8	119·7	19·3	57·4	1,507	39·2	1,464
1952	—	153·0	369·2	226·3	121·9	19·6	57·4	1,507	39·6	1,449
1953	—	142·5	335·2	204·4	115·2	19·8	55·0	1,444	40·2	1,368
1954	—	108·3	315·6	187·4	113·1	19·4	52·6	1,381	40·4	1,302
					SPINSTERS					
1931	17·1	106·8	96·6	21·3	7·8	2·2	51·6	840	67·2	768
1938	22·6	147·9	117·9	22·0	8·6	2·0	61·4	1,000	61·4	1,000
1939–49	36·7	191·0	118·7	29·0	10·2	2·0	69·5	1,132	56·3	1,234
1950	39·3	208·9	123·7	29·2	10·3	2·1	69·4	1,130	52·1	1,332
1951	41·3	219·6	125·3	30·3	10·4	2·2	71·5	1,164	51·5	1,388
1952	40·6	221·2	123·0	29·3	10·5	2·1	70·1	1,142	50·6	1,385
1953	42·4	231·0	119·8	28·4	10·2	2·1	70·7	1,151	49·8	1,420
1954	44·6	237·8	119·5	28·8	10·2	2·1	71·3	1,161	48·9	1,458
					WIDOWS AND DIVORCED WOMEN					
1931	—	121·9	107·0	36·5	14·1	2·2	9·8	961	11·9	824
1938	—	197·1	131·2	50·1	14·7	2·5	10·2	1,000	10·2	1,000
1939–49	—	277·6	199·5	70·6	21·3	2·7	15·3	1,500	10·7	1,430
1950	—	336·8	229·3	83·6	27·2	2·9	18·1	1,775	11·1	1,631
1951	—	328·5	222·2	86·4	27·5	3·0	16·9	1,657	10·3	1,641
1952	—	441·3	236·3	87·3	29·9	3·0	17·0	1,667	9·9	1,717
1953	—	409·3	231·7	84·3	29·5	3·0	16·0	1,569	9·6	1,667
1954	—	427·0	233·2	80·1	29·1	2·9	15·2	1,490	9·3	1,634

From this table it may be seen that the changes in marriage rates (per 1,000 at all ages over 15) from 1950 to 1954 do not apply equally at each age and for each marital condition. Following the heavy incidence of divorce in 1947, remarriage rates at the younger ages rose considerably but have since generally declined toward a more stable level. Too much notice should not be taken of the remarriage rates at ages below 35 where the numbers at risk are small and sharp fluctuations are liable to occur.

The persistently high marriage incidence of recent years has implied a continuing increase in the proportion married. As the increases in marriages were concentrated at the lower ages a further lowering of the average age at first marriage must accompany the depletion of the unmarried, for the age structure

of this component of the population must become more youthful as older members pass into the married population. This can be seen more clearly from Table XIX. In fact the mean age at first marriage fell for bachelors from 27·39 in 1946 to 26·45 in 1954, and for spinsters from 25·06 in 1946 to 24·07 in 1954.

Table XIX.—Ratio of Marriage Rates for Bachelors, Widowers and Divorced Men, Spinsters, Widows and Divorced Women, to those of 1938 taken as 100, by age, 1931 and 1939 to 1954, England and Wales

15-19	20–24	25–34	35–44	45–54	55 and over	All Ages*	Period	15–19	20–24 †	25–34	35–44	45–54	55 and over	All Ages*
BACHELORS								WIDOWERS AND DIVORCED MEN						
100	83	88	87	88	115	86	1931	—	—	85	87	85	94	88
100	100	100	100	100	100	100	1938	—	—	100	100	100	100	100
203	129	100	109	114	106	113	1939–49	—	—	155	136	133	111	131
175	131	92	91	105	102	108	1950	—	—	189	159	150	114	149
194	144	95	92	106	110	115	1951	—	—	175	152	151	121	146
184	143	93	88	103	104	113	1952	—	—	168	148	154	123	145
194	150	91	84	95	106	114	1953	—	—	153	134	146	125	137
206	155	90	81	94	104	116	1954	—	—	144	123	143	122	130
SPINSTERS								WIDOWS AND DIVORCED WOMEN						
76	72	82	97	91	110	77	1931	—	62	82	73	96	88	82
100	100	100	100	100	100	100	1938	—	100	100	100	100	100	100
162	129	101	132	119	100	123	1939–49	—	141	152	141	145	108	143
174	141	105	133	120	105	133	1950	—	171	175	167	185	116	163
183	148	106	138	121	110	139	1951	—	167	169	172	187	120	164
180	150	104	133	122	105	139	1952	—	224	180	174	203	120	172
188	156	102	129	119	105	142	1953	—	208	177	168	201	120	167
197	161	101	131	119	105	146	1954	—	217	178	160	198	116	163

*Age-standardised.

† Based on small numbers.

A summary of the changes in marriage rates in the various age-groups is shown in column (9) of Table XVIII in the form of a comparison of the crude rate, for all ages combined, with that of 1938 and in column (11) as a similar but age-standardised comparison.

The crude first marriage rates in 1954 (as in the previous four years) were not very different from the average of the years 1939-49, being 8 per cent above the 1938 level for males and 16 per cent above for females. The age-standardised ratio, however, shows a rather greater rise over 1938 than the crude rate for males (16 per cent), and for females a very much greater rise of 46 per cent which is about double the rise from 1938 to the average for 1939-49.

The difference between the standardised and unstandardised comparisons arises from the reduction since 1938 in the proportion of bachelors and spinsters who are under the age of 40 (which has been greater in the case of spinsters). The reduction has been brought about by the depletion of numbers of young single persons by the high bachelor and spinster marriage rates of the intervening period, despite continual replenishment from the new generations attaining marriageable age. This feature has been more marked for spinsters than for bachelors.

Remarriage rates of the widowed and divorced taken together are weighted means of the separate rates for widowed and divorced, the weighting depending upon the relative numbers of each class. As a consequence of the substantial increase in the incidence of divorce since the war, the remarriage rates of the divorced are exerting a much stronger influence upon the combined rate, particularly at the younger ages. Since the remarriage rates of the divorced are also several times greater than those of the widowed, this is leading to a considerable inflation of remarriage rates of the divorced and widowed when combined. This is the significance to be attached to the substantial increase in these rates since 1938 ; the crude comparison gives increases in 1954 of 38·1 per cent for widowers and divorced men and 49 per cent for widows and divorced women ; the age-standardised comparison gives increases of 30·2 per cent for widowers and divorced men and 63·4 per cent for widows and divorced women between 1938 and 1954. The rates have, however, been falling again in the last few years, particularly for males.

Marriages of Minors

Of the total marriages registered in 1954, those of 23,475 males and 97,601 females related to minors. These figures compare with 22,430 males and 93,544 females in 1953 and 12,164 males and 59,268 females in 1938. There was a normal excess of females in 1954 ; they outnumbered males by 4·2 to 1, the same as in 1952 and 1953, as compared with 4·1 to 1 in 1951 and 4·9 to 1 in 1938. The increase in the marriage of male minors during the war lowered the proportion over the period 1939-49 to 3·6 to 1.

The bridegroom was a minor in 6·9 per cent of all marriages in 1954, higher than the proportion of 6·5 per cent in 1953 and well above the 1938 figure of 3·4 per cent. In the period 1939-49 the proportion was 6·8 per cent. The corresponding proportions for brides were: 1954, 28·6 per cent; 1953, 27·1 per cent; 1938, 16·4 per cent; and 1939-49, 24·2 per cent. For both bridegrooms and brides the increases in the proportions between 1953 and 1954 were small but significant; they helped to produce appreciable reductions in the average age of all marriages.

These proportions and also marriage rates for minors are given in Table XX, which shows, in columns (6) and (7), that marriage rates of minors in 1954 were 133 per cent and 109 per cent above those of 1938 for males and females respectively. These are much greater increases in marriage rates than those associated with adult ages during the same period.

Table XX.—Marriages of Minors, Proportion to all Marriages, Marriage Rates, and the Ratio of these Rates to that for 1938 : 1931 and 1938 to 1954, England and Wales

Year	Marriages of Minors per 1,000 marriages of all ages		Marriage rates per 1,000 single, widowed and divorced aged 15–20		Ratio of Marriage rates in Cols. (4) and (5) to corresponding rate in 1938 taken as 100	
	Males	Females	Males	Females	Males	Females
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1931	43·5	158·5	6·7	24·8	112	81
1938	33·6	163·8	6·0	30·5	100	100
1939-1949	68·1	242·1	13·9	54·2	232	178
1950	56·9	247·2	12·2	58·5	203	192
1951	62·1	256·3	13·4	60·2	223	197
1952	61·4	258·7	12·9	59·3	215	194
1953	65·0	271·1	13·5	61·3	225	201
1954	68·7	285·6	14·0	63·6	233	209

Marriage Incidence at Reproductive Ages

In relation to population growth a special interest attaches to the effect of changes in marriage incidence upon the proportion of women of reproductive ages who are married, since this may have some influence upon the current level of fertility. The higher the proportion of a woman's reproductive life during which she is married the longer the period during which she is theoretically at risk of childbearing. In recent times, however, the growing uniformity in the size of families has indicated a general tendency, notwithstanding individual variation, for married couples to complete their family building within a fairly narrow range of the earlier years of their married life; correspondingly, the influence of marriage age upon fertility has diminished.

Marriage Rates.—It was customary before 1946 to base the main discussion of the marriage trends at the reproductive ages on all marriages, whether first or remarriage. The fact of primary interest, however, is the establishment of additional marriages, that is to say first marriages, since remarriages do no more than make good, to some extent, the marriages which are broken by death or divorce. The earlier practice of including remarriages was justified in that, at the reproductive ages, both the changes from year to year and the actual marriage rates for the whole unmarried female population were negligibly different from those for spinsters alone.

The rising incidence of divorce during the war and the abnormally high incidence in post-war years has increased the distortion imparted by the inclusion of remarriages, so that it has become greater than can be tolerated. In Table XXI are set out All Marriage rates for 1911, 1931 and 1938 and First Marriage rates for these years and single years thereafter to 1954, from which the distortion before 1938 may be judged. Diagram 2 displays a continuous record of marriage rates of women by age from 1911 to 1954, the rates shown from 1911 to 1937 being based on all marriages and those from 1938 on first marriages.

Table XXI.—Marriage Rates of Women by Age, 1911, 1931 and 1938 to 1954, England and Wales

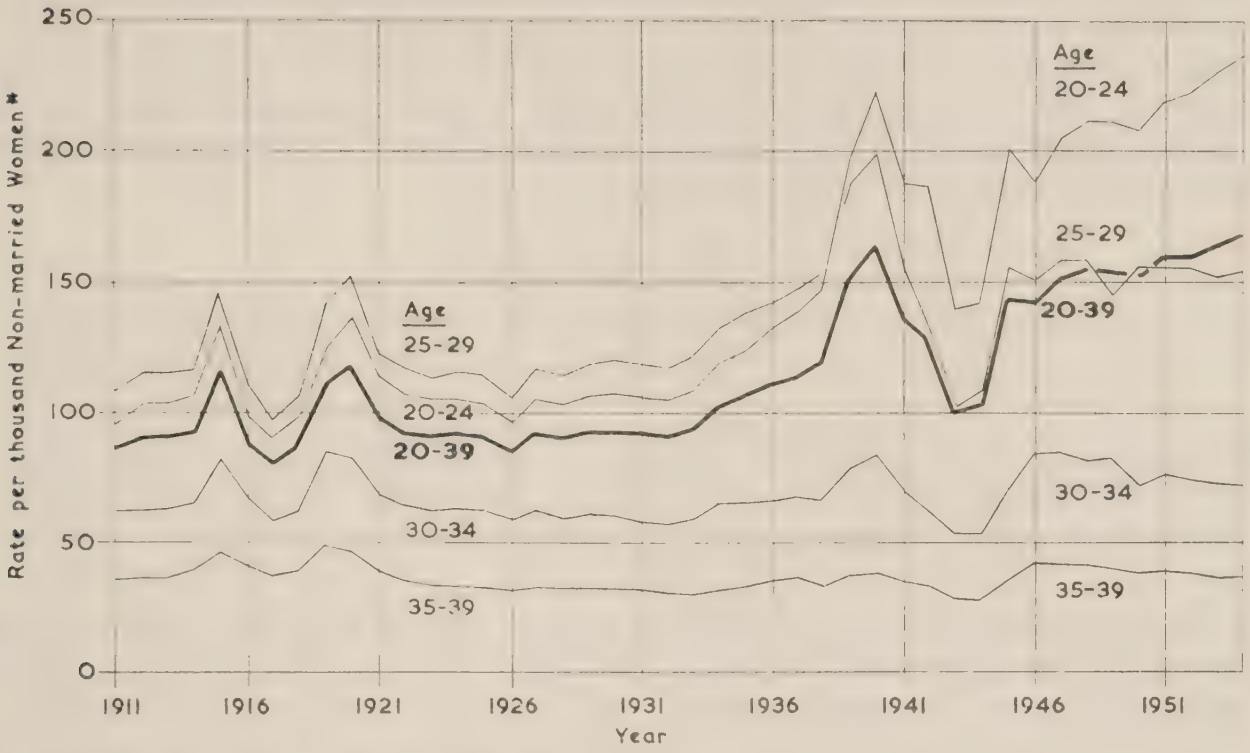
Period	Age							Aggregates	
	15–19	20–24	25–29	30–34	35–39	40–44	45–49	20–39	15–49
	All Marriages per 1,000 Spinsters, Widows and Divorced Women								
1911	11·2	95·9	109·8	62·6	35·5	22·0	14·8	86·9	54·0
1931	16·9	106·5	119·8	59·6	31·0	18·0	12·6	92·8	57·8
1938	22·6	148·1	154·4	69·9	37·9	21·5	13·8	119·0	71·2
	First Marriages per 1,000 Spinsters								
1911	11·2	97·1	109·8	59·2	29·2	16·2	10·4	88·7	54·6
1931	17·1	106·8	119·1	57·2	27·0	14·5	9·6	93·6	59·3
1938	22·6	147·9	154·0	67·2	33·1	16·8	10·6	119·7	72·7
1939	32·0	197·6	188·7	78·4	37·2	18·6	11·5	150·8	90·3
1940	38·4	222·8	198·8	84·7	39·1	20·9	12·0	164·8	100·4
1941	36·3	188·9	155·1	70·3	35·1	20·6	12·1	136·5	85·0
1942	38·9	187·4	133·2	63·0	33·7	20·2	12·3	129·8	82·3
1943	34·2	141·2	101·7	54·0	28·1	17·6	11·7	100·6	65·6
1944	33·1	143·1	109·9	53·5	27·9	17·1	11·3	104·3	67·1
1945	40·0	200·6	155·6	71·4	35·4	20·2	13·0	144·4	89·9
1946	33·9	189·0	150·7	84·5	42·3	22·9	14·4	142·5	86·4
1947	36·7	205·5	157·7	85·1	42·5	22·8	13·6	152·1	91·1
1948	39·4	212·5	158·1	81·3	42·7	22·6	13·4	156·0	92·9
1949	40·5	212·0	145·6	81·8	40·4	21·3	13·1	153·9	91·3
1939–49*	36·7	191·0	150·5	73·5	36·8	20·4	12·6	139·6	85·7
1950	39·3	208·9	156·0	72·9	38·7	20·3	12·7	152·5	89·4
1951	41·3	219·6	156·4	76·6	39·9	21·3	12·8	159·7	93·2
1952	40·6	221·2	155·7	74·8	38·8	20·7	13·1	160·2	92·2
1953	42·4	231·0	152·3	74·0	36·9	20·9	12·3	164·2	93·5
1954	44·6	237·8	154·5	72·0	37·8	21·1	12·6	168·2	95·0

* Annual averages

Before 1911, when the diagram begins, a long decline brought the rates down from 1873, when the highest rate in the nineteenth century was recorded, to 1909, when the lowest rate up to that time was recorded. Rates rose slightly from 1909 to 1914, when the trend became obscure owing to the wide fluctuations associated with the First World War. After the war no clear trend was observed until 1932, when a steady improvement began and was continued until 1938. At this point, judging by the fragmentary evidence available, a full recovery had been made to the 1873 peak. The fluctuations of war again intervened to obscure the trend but, as may be seen from Table XXI, the annual average rates over the disturbed period of 1939-49 were, at the aggregated ages, substantially in excess of those for 1938; indeed, for almost every individual age-group the 1939-49 average rates exceed those for 1938.

Generally speaking there has been very little decline from the high rates reached soon after the war. Since 1950 the rise has been resumed at the younger ages, especially in the 20-24 age-group, and the average rate for the reproductive age range is now almost as high as in 1940, i.e. nearly as high as it has ever been during the period for which such statistics exist in this country.

Diagram 2.—Marriage Rates* of Women by Age, 1911 to 1954, England and Wales (*See text*)



* 1911–37 : All marriages per 1,000 spinsters, widows and divorced women
1938–54 : First marriages per 1,000 spinsters

The marriage history of recent years is thus remarkable in that for about 15 years marriage rates on average have been maintained above the highest level ever reached in the nineteenth century, even for a single year. This long-continued maintenance of high marriage rates produces important changes. Under such circumstances the population is depleted more and more of its unmarried element and those unmarried persons whose inclinations or health do not favour marriage form an increasing proportion of the unmarried group as a whole, i.e. of those nominally at risk. Even the maintenance of constant marriage rates by those more appropriately regarded as at risk would not in these circumstances prevent a decline in the rates calculated on the basis of all the unmarried of marriageable age. For this reason a decline in nominal marriage rates has been expected. For first marriages this decline has as yet only affected the older ages, and even there not yet to any significant extent.

During the nineteenth century the marriage rate for the age-group 20-24 always exceeded that for the next older group 25-29. In 1901 this position was reversed, the older group recording a higher rate for the first time. Diagram 2 shows that the younger women regained their earlier lead in 1939 and have retained it. As the majority of brides' ages lie between 20 and 30, changes in the relative marriage incidence in the two five-year age-groups within this range, viz., 20-24 and 25-29, are indications of changes in the average age at marriage, which has an influence on the ultimate size of families. After 1939 the younger age-group increased its lead over the older group, and a wide gap opened up between them so rapidly that some part must be attributed to abnormal conditions associated with the war. However, at least one of the conditions which has enabled girls to marry earlier—the changing relationships between the numbers of males and females—may be assumed to be of a persistent nature, and this probably provides an explanation of the fact that the gap is still widening and the average age at marriage is still falling.

Factors Influencing Marriage.—The nature and the probable future course of factors leading to the rise in marriage rates were discussed in the Civil Text Volume of 1940-1945 on pages 38-40, in the 1946-1950 Volume on pages 40-42, and in the 1951 Text on pages 69 and 70. It has been shown that, while the ratio of males to females at ages 15-44 in the total population has been rising continuously since 1921, it has risen still more in the unmarried section of the population at these ages. The following statement, based on census populations, shows the changes in sex ratio since 1871.

Males per 1,000 Females :—

	1871	1901	1911	1921	1931	1951
Total population, 15–44	927	923	926	876	915	969
Unmarried population, 15–44	967	950	959	875	945	1,120

The abnormally low ratio in 1921 and sharp rise since that year are the striking features of this statement. It will be noted that in 1951 among the unmarried aged 15-44, males exceeded females for the first time, even though the sex ratio is based on census populations which exclude the predominantly male armed forces stationed abroad. (It has to be remembered, however, that bridegrooms tend to be a few years older than their brides. If account is taken of this the deficiency of unmarried males before the Second World War is seen to have been even greater than is suggested by the statement, while the position in 1951 probably represented approximate balance between the sexes.)

The main factors influencing these changes in the sex ratio are generally understood. The proportion of males to females at birth has increased (1911-15, 1,038 per thousand; 1931-35, 1,051 per thousand; 1946-50, 1,061 per thousand) and improvements in infant and child mortality have raised the ratio of male to female survivors. More important, in the early years of the century there was heavy emigration with a male preponderance, and the losses in the First World War fell particularly heavily on young males. On the other hand, the much smaller male losses in the Second World War were in part offset by the heavy post-war emigration of the wives of Allied Servicemen. In the absence of large scale migration and special factors associated with war, it seems likely that the factors producing the current high sex ratio will persist and a further increase in the ratio may be expected.

Total Married Women of Reproductive Age.—Illegitimacy being comparatively low in this country the fertility of the community is determined largely by the total number of married women of reproductive age in the population, that is by the survivors of women who married at any time in the preceding 35 years and who have not yet passed out of the childbearing ages. New marriages will continually replenish this number. In the reproductive age-group the annual addition of new marriages in relation to the married population represents only a small fraction, of the order of 5 per cent, so that short-term changes in the marriage rates will have a correspondingly reduced effect upon the total proportions of married women in the population at those ages. The proportions of married women are shown by five-year age-groups to age 49 for selected years in Table XXII.

Table XXII.—Married Women per 1,000 total Female Population at each Age and Ratio of proportion to that of 1938 taken as 100: 1911, 1931, 1938 and 1946 to 1954, England and Wales

Year	Age							Aggregates	
	15–19	20–24	25–29	30–34	35–39	40–44	45–49	20–39	15–49
	Married Women per 1,000 total Female Population								
1911	12	242	558	711	752	755	729	552	502
1931	18	257	587	733	755	749	733	572	529
1938	23	328	643	733	771	768	736	623	566
1946	35	436	696	800	797	784	762	686	626
1947	33	445	714	802	807	785	763	697	635
1948	38	457	730	807	816	791	763	707	643
1949	41	467	736	823	822	795	768	716	651
1950	40	473	762	814	826	801	770	724	657
1951	42	475	769	828	832	812	780	731	666
1952	42	489	778	835	838	819	784	741	673
1953	43	502	785	842	843	826	789	749	678
1954	46	515	791	850	847	833	794	757	683
	Ratio of proportion to that of 1938 taken as 100								
1911	52	74	87	97	98	98	99	89	89
1931	78	78	91	100	98	98	100	92	94
1938	100	100	100	100	100	100	100	100	100
1946	152	133	108	109	103	102	104	110	111
1947	143	136	111	109	105	102	104	112	112
1948	165	139	114	110	106	103	104	113	114
1949	178	142	114	112	107	104	104	115	115
1950	174	144	119	111	107	104	105	116	116
1951	183	145	120	113	108	106	106	117	118
1952	183	149	121	114	109	107	107	119	119
1953	187	153	122	115	109	108	107	120	120
1954	200	157	123	116	110	108	108	122	121

Throughout the period covered by the table the proportions married in the total female population have increased at each age-group and these increases have been outstanding at ages under 25. The proportion in 1954 exceeded that of 1938 by no less than 100 per cent at age 15-19 and by 57 per cent at age 20-24. The increase of 23 per cent at age 25-29 is less striking but hardly less significant, applying as it does to larger proportions married. At the younger ages the major part of the increase occurred between 1938 and 1946, and though an upward trend continues the pace is slower.

The remarkable rise in the proportions at the younger ages and the much more modest increases at the older ages bring into relief two important changes—more women are marrying, and they are marrying at younger ages.

In any particular year the proportions married increase with advancing age, at first very rapidly and then more slowly, to a maximum close to age 35. They then decline slowly as new marriages are increasingly offset by widowhoods, but the total reduction in the proportion to age 49 is relatively small.

The last two columns of Table XXII show the proportion of married women in the reproductive age-group 15-49 as a whole and in the more critical group 20-39, among whom 90 per cent of births occur. The proportions represent the fractions of the reproductive years which fall within married life. From 1911 to 1931 this proportion rose slightly from 50·2 to 52·9 and it rose more rapidly between 1932 and 1938 to 56·6. It had reached 62·6 by 1946 and 68·3 by 1954. In the age-group 20-39 the proportion had risen from 55·2 in 1911 to 75·7 in 1954.

These increases have been exaggerated by the ageing of the population in the 15-49 group since 1911 which has tended to increase the relative number of women at the older ages within the group, i.e. where the proportion married is greater. To remove this distortion a marriage index for the year can be calculated by expressing the actual number of married women in the group as a ratio to the number which would have been married, if the populations in the component five-year age-groups had been subject to standard proportions married in those age-groups, viz., those for 1911. The difference of this ratio from unity thus indicates changes in the proportions married apart from those due to ageing.

Marriage indices standardised on 1911 proportions married within successive five-year age-groups from 15 to 49, with the corresponding unstandardised figures, are shown below :—

Year	1911	1931	1938	1946	1948	1951	1954
Standardised	1·000	1·022	1·067	1·146	1·168	1·200	1·233
Unstandardised	1·000	1·054	1·127	1·247	1·281	1·327	1·361

The correction for ageing shows that the true increase in the proportion married among the women aged 15-49 between 1911 and 1954 was 23·3 per cent instead of the 36·1 per cent suggested by the crude proportions, over one third of the latter increase being due to the ageing of the population and unrelated to the incidence of marriage. If comparison is confined to the narrower age-group 20-39, where clearly the effect of ageing is correspondingly restricted, standardisation only reduces the excess of 1954 over 1911 from 37·1 per cent to 31·8 per cent.

The fact that such a high degree of marriage has been attained is important. There is no sign yet of any recession in the proportions. On the contrary, it would not be necessary for rates of new marriages to be as high as in the years recently experienced to achieve further increases in the proportion of married women in the population aged 15-49. The marriage rates experienced before the war would not however suffice for this purpose. This may help to put recent changes in age marriage rates in proper perspective.

Seasonal Incidence of Marriage

Table D of Part II, 1954, shows the number of marriages registered in England and Wales and the rates per 1,000 population in each quarter in serial form for decennial periods from 1841 and for each year 1941 to 1954. In the same volume the monthly incidence for marriages is shown for each year 1947 to 1954 in Table N.

Throughout the nineteenth century the highest marriage rates occurred consistently in the December quarter and the lowest in the March quarter. Between the two World Wars a new pattern emerged and almost without exception the two summer quarters became the highest and the two winter quarters the lowest. The March quarter has generally been that of lowest marriage incidence, but the incidence rises and relativity is disturbed when Easter happens to fall within that quarter.

Since the Second World War, in addition to the temporary shift from the June to March quarters in the years when Easter fell in the March quarter, there has also been a transfer of marriages from the June to March quarters of a more permanent and progressive character. The disturbance of two March Easters in this short period obscures this trend and an approximate correction for this disturbance is desirable to clarify the picture.

In pre-war years, the last two March Easters occurred in 1932 and 1937. The incidence of marriages in the March and June quarters in these years and in those immediately preceding and succeeding them, expressed as a percentage of one fourth of the annual total of marriages, was as follows :—

Year	March Qtr.	June Qtr.	Year	March Qtr.	June Qtr.
1931	60	109	1936	56	114
1932	81	90	1937	79	89
1933	57	108	1938	58	113

According to these data, a March Easter leads to a transfer of an average of 22 from the June to the March quarter index. This adjustment has been made to the figures for 1948 and 1951 (when Easter fell in the March quarter), to provide the following set of figures from 1946 to 1954, (again related to a quarterly average of 100). These indices are comparable in the sense that they have been freed from Easter disturbance.

Year	1946	1947	1948	1949	1950	1951	1952	1953	1954
March Quarter	81	75	74	87	97	100	122	109	112
June Quarter	105	109	116	102	90	96	80	89	87

The possible weakness of the assumption on which the 1948 and 1951 figures have been adjusted, namely that the effect of a March Easter in these years was the same as in 1932 and 1937, must be borne in mind, but it is evident that a persisting change has been taking place since 1947 or 1948. The monthly incidence of marriages, available for the years from 1947, throws some further light on this. Account must, however, be taken of the varying lengths of months by calculating daily averages. Table XXIII and the lower section of Table N show the ratio of these daily averages for the month to the daily average for the year from 1947 to 1954.

Table XXIII.—Comparison of Marriage Incidence by calendar months, 1947 to 1954, England and Wales

Period	Ratio of Daily Average Number of Marriages for the month to Daily Average for the year taken as 1,000							
	1947	1948	1949	1950	1951	1952	1953	1954
January	583	684	677	506	470	473	543	561
February	726	656	774	787	647	825	788	839
March	969	1,543*	1,190	1,637	2,523*	2,362	1,941	1,987
April	1,262	792	1,272	1,066	481	779	1,067	1,030
May	810	791	513	602	574	599	642	500
June	1,212	1,246	1,296	1,052	1,166	1,030	990	1,101
July	1,068	1,376	1,327	1,226	1,078	1,059	1,121	1,322
August	1,270	1,052	1,035	1,155	1,153	1,271	1,306	1,046
September	1,206	1,279	1,268	1,438	1,449	1,206	1,218	1,275
October	830	840	840	713	689	691	790	803
November	831	619	582	573	531	634	546	559
December	1,225	1,103	1,210	1,230	1,191	1,055	1,024	963
Year	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**

* Easter fell in March in 1948 and 1951.

Apart from the effect of a March Easter which appears to bring forward marriages from the June quarter to this month, there has been a tendency since the war for marriages to occur relatively more frequently in March and less frequently in later months of the year; this is associated to some extent with the maximum income tax relief secured by a March marriage. The concentration in March was especially marked in 1952.

Apart from this feature the influence of Easter and Christmas is also clearly discernible in March (or April) and December. The relative incidence is also naturally high in the holiday months, June to September.

Marriage Incidence in different parts of the Country

The number of marriages and the marriage rates in regions, counties and county boroughs for each year are published in Table F of successive issues of Part II. Up to 1949 classification was by Geographical Regions and from 1950 by Standard Regions, but Appendix F to Part II for 1946 to 1949 provides an additional tabulation by Standard Regions.

It has frequently been stressed in previous Reviews that the significance of differences in local marriage rates is reduced by the fact that the district in which the marriage is registered is often the district of residence of only one of the parties and sometimes of neither, though this weakness would be less in comparisons between large sections of the country than between small local areas. Another difficulty arises from the fact that marriage rates for local areas were calculated upon civilian populations up to 1949, and upon home populations (that is including the armed forces stationed in the area) from 1950, though in these and other years the parties to the marriage would include members of the armed forces, whether stationed at home or abroad. To minimise distortion from this source, ratios of local rates to the national rate for each year may be considered, as shown in Table XXIV.

Table XXIV.—Ratio of Marriage Rates in Standard Regions of England and Wales to that of the whole country, selected years 1946 to 1954

Standard Region	1946	1947	1949	1951	1952	1953	1954
Ratio of Regional to England and Wales Rate taken as 1,000							
Northern	1,054	1,016	1,033	1,031	1,051	1,048	1,035
East and West Ridings	1,047	1,029	1,037	1,030	1,025	1,028	1,016
North Western	1,023	1,015	1,017	1,002	1,005	996	1,001
North Midland	1,004	1,005	1,016	997	994	992	984
Midland	978	967	1,021	1,027	1,011	1,000	1,009
Eastern	868	872	859	851	852	855	859
London and South Eastern	1,024	1,057	1,028	1,054	1,055	1,067	1,068
County of London	*1,231*	*1,280*	*1,225*	*1,253*	*1,253*	*1,258*	*1,282*
Southern	965	952	950	942	924	930	943
South Western	928	935	922	917	917	922	923
Wales I (*South East*)	1,025	989	1,018	998	1,043	1,018	1,008
Wales II (*Remainder*)	927	945	913	915	894	898	892
Ranking of Ratio							
Northern	1	3	2	2	2	2	2
East and West Ridings	2	2	1	3	4	3	3
North Western	5	4	6	5	6	6	6
North Midland	6	5	7	7	7	7	7
Midland	7	7	4	4	5	5	4
Eastern	11	11	11	11	11	11	11
London and South Eastern	4	1	3	1	1	1	1
Southern	8	8	8	8	8	8	8
South Western	9	10	9	9	9	9	9
Wales I (*South East*)	3	6	5	6	3	4	5
Wales II (*Remainder*)	10	9	10	10	10	10	10

The attraction of London for marriage has always been reflected in the statistics. In the years immediately preceding the war about 12½ per cent of the total marriages of the country were registered in the County of London, giving it a marriage rate about 25 per cent higher than that of the country as a whole. Since the war the London population has remained much below its pre-war level, so that, although only about 9½ per cent of all marriages are registered in the County, the marriage rate is still about a quarter above the national level.

The unique position of London is dependent in part upon the attraction of a London wedding for those resident elsewhere. The rate in the Eastern region, some 12 to 15 per cent below the national average, is also notable. Other rural regions—Southern, South Western and Wales II—also show low rates, 6, 8 and 11 per cent respectively below the average in 1954. There are no other important differences. It may be seen from the ranking orders in the lower section of the table that the regions tend to maintain their relative positions from year to year.

WIDOWHOOD AND WIDOWERHOOD

In Table SS of Part II the number of marriages terminated by the death of a spouse are given by joint ages of the deceased and the surviving spouse. Only cases of deaths in which marital condition was stated are included in the table, but the proportion of "not stated" to "stated" marital condition is given for each age of deceased. It has been a feature of these statistics, since they were first collected in 1938, that this "not stated" proportion has been very low for female deaths, a small fraction of one per cent, but has been substantial for male deaths, particularly for ages under 30. Table XXV shows the "not stated" proportions for males for the years 1938 and 1945 to 1954.

Table XXV.—Percentage "not stated" to "stated" marital condition—Deceased Men, 1938 and 1945 to 1954, England and Wales

Age of Deceased	1938	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
All Ages	8·2	5·4	5·5	5·5	5·4	5·0	4·9	4·9	4·5	4·3	4·1
15– ..	22·7	13·8	15·3	13·8	10·8	12·8	19·6	14·8	8·7	9·3	10·2
20– ..	40·4	15·0	20·7	28·8	27·7	28·9	40·4	47·2	49·3	51·6	48·2
25– ..	31·5	14·1	21·2	24·6	22·8	24·8	28·6	35·1	34·3	33·9	30·7
30– ..	28·6	16·0	20·5	20·3	20·0	19·7	19·7	21·7	23·9	21·7	22·9
35– ..	22·2	14·7	16·2	16·3	16·4	16·2	14·8	16·3	17·4	16·9	15·6
40– ..	17·4	12·2	13·7	14·7	13·1	12·6	12·4	12·0	12·3	11·7	10·7
45– ..	16·5	10·1	9·9	11·0	9·7	9·8	9·5	9·3	8·6	8·3	8·0
50– ..	12·6	8·3	8·2	8·2	8·5	7·3	6·8	7·0	6·4	6·0	5·7
55– ..	10·3	7·1	6·6	6·7	6·8	5·9	5·7	5·3	5·3	4·6	4·6
60– ..	8·3	5·8	6·0	5·9	5·6	5·0	4·8	4·9	4·3	4·0	3·9
65– ..	6·2	5·0	4·6	4·9	4·6	4·0	3·9	4·0	3·6	3·3	3·1
70– ..	5·2	4·5	4·4	4·3	3·9	3·5	3·4	3·5	3·1	3·1	2·8
75 and over	4·3	4·1	4·0	3·8	3·5	3·4	3·4	3·2	2·9	2·8	2·7

From 1938 to 1945 there was a more or less general and steady decrease in the percentage "not stated." From 1946, however, the percentage though continuing to decrease at ages over 45 has increased at younger ages, and since 1951 at ages 20-24 the percentage has exceeded that originally recorded in 1938. The same is true at ages 25-29 except in 1954 when an appreciable reduction brought the percentage to below the 1938 level. Failure to indicate marital condition is more likely for bachelors than for married men whose widows are commonly the informants. If this is so, proportional allocation of the "not stated" cases will lead to some bias, and to this extent the rates for males given later must be accepted with some caution at the younger ages.

Table XXVI shows widowhood* and widowerhood rates by age for selected periods from 1939 to 1954. These rates are different in character from published death rates because they are derived solely from the deaths of married persons

* A widowhood rate is defined as "The number of widows in a given age-group produced by the death of a husband in the current year per 1,000 wives in that age-group".

and the latter represent selected lives mainly because they exclude persons whose health denies them the opportunity of marriage. Nevertheless these rates reflect in general the sex and age distribution and annual changes of mortality rates.

Table XXVI.—Widowerhoods per 1,000 Married Men and Widowhoods per 1,000 Married Women in each age-group, 1939 and 1946 to 1954, England and Wales*

1939	1946–50	1951	1952	1953	1954	Age of Surviving Spouse	1939	1946–50	1951	1952	1953	1954
Widowerhoods per 1,000 Married Men							Widowhoods per 1,000 Married Women					
8·7	7·5	7·8	7·0	7·0	6·9	All Ages	14·3	13·5	14·8	13·6	13·7	13·7
2·1	1·4	0·8	0·7	0·6	0·5	Under 25	1·8	1·1	0.9	0·9	0·8	0·8
2·3	1.4	0·9	0·8	0·8	0·7	25–	2·0	1·6	1·3	1·2	1·2	1·1
2·3	1.6	1·1	1·0	1·0	1·0	30–	2·8	2·2	1·9	1·8	1·7	1·7
2·8	1·9	1·5	1·4	1·3	1·3	35–	4·4	3·3	3·1	2·9	2·8	2·8
3·6	2·4	2·2	2·0	2·0	2·0	40–	6·6	5·2	5·1	4·7	4·6	4·5
4·9	3·9	3·4	3·1	3·0	3·0	45–	10·3	9·0	8·8	8·2	7·8	7·8
7·4	5·7	5·5	5·2	5·0	5·0	50–	16·0	14·2	15·6	14·2	14·2	13·9
10·5	8·6	8·6	7·5	7·7	7·3	55–	22·9	21·2	23·3	21·5	21·4	21·2
16·5	13·7	13·9	12·3	12·1	11·8	60–	35·0	33·0	37·8	32·8	33·0	32·5
24·8	21·0	21·8	19·7	19·8	19·1	65–	49·6	47·1	53·8	48·0	49·2	48·3
37·3	32·9	35·9	31·6	30·9	30·5	70–	72·1	69·8	72·3	69·4	70·2	69·9
73·3	58·5	66·1	57·9	58·6	56·8	75 and over	126·4	95·3	118·6	106·5	108·2	107·6

* Non-civilian casualties were not classified by marital condition before 1950. An approximate allowance has been made for them by rateable allocation in earlier years.

The chance of a married woman aged 25 becoming a widow before she attains the age of 45 is, on the average, not more than 1 in 20, though this is about twice the risk that she herself will die within this same span of years.

For demographic purposes, however, it is not the nature of small differentials within the main structure of widowhood and widowerhood rates that is important, but the general level of these rates. It is clear that the current level of mortality at ages under 45 is so low that the termination of marriages by the death of one or other of the partners is not significantly depleting the younger married population or, in particular, the population of married women in the reproductive ages.

DIVORCES AND REMARRIAGE OF DIVORCED PERSONS

Divorces

Divorce statistics were shown in Tables O and P in Part II up to 1949, and more detailed statistics have been shown in Tables O and P1 to P4 since 1950.

During the period 1938 to 1950 the annual incidence of petitions for divorce underwent sharp fluctuations, mainly due to the effect of the war. A new disturbing factor was introduced on 2nd October, 1950, by the Legal Aid and Advice Act, 1949, which extended the facilities for divorce of persons of limited means. The incidence of divorce over the period 1950 to 1952 may therefore be compared on the one hand with that in the years following the First World War, and on the other hand with that in the years following 1926 when the Poor Persons Rules, 1925, came into operation—Rules which in some respects disturbed divorce incidence in a manner similar to that of the Legal Aid and Advice Act, 1949. In Table XXVII is shown the number of petitions filed and decrees absolute granted in each year from 1918 to 1930 and from 1945 to 1954.

Table XXVII.—Petitioning for Divorce and Decrees Absolute granted, 1918 to 1930 and 1945 to 1954, England and Wales

Year		Divorce Petitions filed (dissolution and nullity)	Decrees Absolute granted (dissolution and nullity)	Year		Divorce Petitions filed (dissolution and nullity)	Decrees Absolute granted (dissolution and nullity)
(End of First World War)	1918	2,362	1,111	(End of Second World War)	1945	25,711	15,634
	1919	5,184	1,654		1946	43,163	29,829
	1920	4,565	3,090		1947	48,501	60,254
	1921	2,907	3,522		1948	37,919	43,698
	1922	2,468	2,588		1949	35,191	34,856
	1923	2,833	2,667		1950	29,729	30,870
	1924	2,978	2,286	(Legal Aid and Advice Act, 1949)†			
	1925	3,054	2,605		1951	38,382	28,767
(Poor Persons Rules, 1925)*	1926	3,631	2,622		1952	34,567	33,922
	1927	4,294	3,190		1953	30,542	30,326
	1928	4,050	4,018		1954	29,036	28,027
	1929	3,997	3,396				
	1930	4,288	3,563				

* Came into operation on 6th April, 1926.

† Came into operation on 2nd October, 1950.

After the First World War, the incidence of divorce petitioning rose steeply to a peak in 1919 and then rapidly declined. After 1922 the numbers increased

gradually each year until the introduction of the Poor Persons Rules, 1925, intervened to produce a sharp rise in the general level. After the Second World War the number of petitions each year was about ten times as great as before and in the peak year of 1947 there were more than 48,000 petitions. Thereafter a steep decline brought the figure down to 29,729 by 1950 and it does not seem unreasonable to assume that, in the absence of the Legal Aid and Advice Act, 1949, a figure slightly below 30,000 might have been recorded in 1951.

The Legal Aid and Advice Act, 1949, did positively increase the facilities for divorce available to persons of limited means, while the Poor Persons Rules, 1925, merely altered the procedure by which the then existing facilities were made available. Nevertheless, it is thought that their influence may have been similar in some respects since, as a result of publicity, they enhanced existing facilities by making those requiring help aware of its availability. An examination of the petitions filed in the years from 1925 to 1930 in Table XXVII will show that the introduction of the Rules led to a steeper rise in the annual incidence of divorce petitioning than was experienced from 1922 to 1925, though far less steep than that immediately following the war. After a minor peak, there was a decline to 1929, after which a gradually increasing trend was again resumed. There has been some similarity to this experience in the years following 1951, since after an upward surge the numbers of petitions have fallen away again. In 1954 the number was slightly below that for 1950.

Decrees absolute have naturally followed a slightly different trend, since the extent to which they could mirror the changes in numbers of petitions has been affected by a procedural time lag of inconstant length dependent upon court facilities and pressure of business; but apart from timing differences the broad pattern has not been dissimilar.

The peak in divorce petitioning after the First World War was reached in 1919; the peak in the granting of decrees absolute was not reached until two years later. Following the introduction of the Poor Persons Rules, 1925, a peak in petitioning was reached in 1927, but not until the next year was the peak reached in the granting of decrees absolute. Since the Second World War a number of changes have been made in the procedure for obtaining a decree absolute and their influence may be seen in the sharper rise to the post-war peak (over 60,000 decrees in 1947) and a correspondingly steeper decline thereafter. Since 1952, however, the numbers of petitions and of decrees in each year have, as conditions have become more stable, differed by only relatively small margins. The 1954 level of incidence of decrees, when related to the numbers of antecedent marriages from which they arise, indicates that about 7 per cent of marriages are terminated by divorce*.

A detailed analysis and commentary on divorce rates by current ages of husband and wife in combination, by current age of wife and duration of marriage, by age of wife at marriage and duration of marriage, and by current age of wife and size of family was included in the 1946-50 Civil Text on pages 62 to 67.

Remarriage of Divorced Persons

One aspect of divorce which is of importance is its impact upon the number of married persons in the population and thus upon the incidence of legitimate births. It is, however, necessary to examine together the incidence of divorce

* Current decrees at 28,000 annually may be regarded as relating to marriages contracted 5 to 15 years earlier when they were running at an average of 385,000 a year.

and of remarriage of divorced persons since only the net effect of these two forces actually reduces the married population.

The general trend of the numbers of married persons who were divorced and of divorced persons who remarried is shown in Table XXVIII.

Table XXVIII.—Annual number of Persons Divorced and of Divorced Persons who Remarried, 1926 to 1954, England and Wales

Period	Number of persons divorced in the period	Number of divorced persons who remarried in the period							
		Persons	Men	Women	Divorced men marrying spinsters	Divorced men marrying widows	Divorced men and women inter-marrying	Divorced women marrying bachelors	Divorced women marrying widowers
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1926–30 Averages	6,716	3,917	2,128	1,789	1,662	270	392	1,225	368
1931–35 Averages	8,022	5,154	2,777	2,377	2,179	302	592	1,597	484
1936–40 Averages	12,361	8,558	4,580	3,978	3,641	464	949	2,746	758
1941–45 Averages	20,778	12,548	7,093	5,455	5,453	874	1,532	3,587	1,102
1946–50 Averages	79,803	48,898	26,273	22,625	17,767	3,303	10,406	14,271	3,151
1936	8,114	6,468	3,507	2,961	2,788	354	730	2,009	587
1937	9,772	6,988	3,759	3,229	2,964	374	842	2,192	616
1938	12,500	8,179	4,404	3,775	3,467	471	932	2,576	733
1939	15,910	10,698	5,715	4,983	4,558	550	1,214	3,480	896
1940	15,510	10,458	5,514	4,944	4,430	571	1,026	3,474	957
1941	12,736	9,378	5,091	4,287	4,028	575	976	2,900	899
1942	15,236	9,706	5,437	4,269	4,214	664	1,118	2,815	895
1943	20,024	11,049	6,157	4,892	4,712	797	1,296	3,237	1,007
1944	24,624	13,728	7,914	5,814	6,009	981	1,848	3,693	1,197
1945	31,268	18,879	10,867	8,012	8,303	1,355	2,418	5,292	1,511
1946	59,658	29,636	16,479	13,157	11,781	2,287	4,822	8,596	2,150
1947	120,508	56,945	30,751	26,194	21,272	3,980	10,998	17,277	3,418
1948	87,396	58,728	31,201	27,527	21,072	3,812	12,634	17,541	3,669
1949	69,712	51,494	27,645	23,849	18,150	3,400	12,190	14,435	3,319
1950	61,740	47,687	25,290	22,397	16,558	3,038	11,388	13,503	3,200
1951	57,534	44,171	23,110	21,061	14,809	2,880	10,842	12,524	3,116
1952	67,844	46,098	23,719	22,379	14,861	2,965	11,786	13,071	3,415
1953	60,652	43,989	22,557	21,432	14,114	2,798	11,290	12,349	3,438
1954	56,054	41,979	21,555	20,424	13,257	2,743	11,110	11,658	3,211

Expressed as percentages of the number of persons divorced in the same period the averages for the quinquennial periods 1926-30 to 1946-50 and the single years 1947 to 1954 of remarriages of divorced persons (columns (2) and (3) of Table XXVIII) were :—

1926–30	1931–35	1936–40	1941–45	1946–50
58·3	64·2	69·2	60·4	61·3

1947	1948	1949	1950	1951	1952	1953	1954
47·3	67·2	73·9	77·2	76·8	67·9	72·5	74·9

Divorced persons who remarry during any period are not confined to those granted a decree absolute during the same period, so that the above figures do not precisely represent the proportion of divorced persons who ultimately remarry. Most of these figures will understate the true proportion, though perhaps not by a substantial amount when the rate of increase of divorces is slow. The figures for the years 1948-51 and 1953-54 after peaks in divorce incidence may, however, overstate the proportion. Bearing these disturbances in mind it

still seems likely that the proportion of divorced persons who ultimately remarry has been rising, and is perhaps in the region of two thirds to three quarters, so that the net loss to the married population is only a fraction of the total number divorced.

Throughout the period covered by Table XXVIII (1926-1954) the number of divorced men who remarried exceeded that of divorced women who remarried, the latter being about 87 per 100 men. The percentage ratios of divorced women to divorced men among those remarrying rose slightly between 1926-30 and 1936-40 from 84·1 to 86·9, fell to 76·9 in 1941-45, rose to 86·1 in 1946-50, 91·1 in 1951, 94·4 in 1952; since when the proportion has remained fairly stable, the figures for 1953 and 1954 being 95·0 and 94·8.

GENERAL MORTALITY

Introduction

The deaths recorded in the Registrar General's Annual Review, and analysed in the Commentary (Text) volume, are those registered in the calendar year to which the volume relates, unless it is otherwise stated. The deaths recorded are total deaths, i.e., including deaths of non-civilians and foreign visitors, for the country as a whole, or for any particular area.

Classification of deaths by area of residence

All deaths are classified according to the local area in which the deceased usually resided. The rules of assignment which determine the place of residence in difficult cases are generally similar to those used in census enumeration and in the preparation of population estimates (see Census 1951, England and Wales, Report on Usual Residence and Workplace*), but the reader's attention is drawn to the following points:—

1. The inmates of certain categories of institution are regarded as normally resident in the institution; for example:— almshouses; homes and infirmaries for the elderly maintained by local authorities; children's homes; boarding schools (including the residential public schools); mental deficiency institutions and mental hospitals; prisons and borstal establishments.

   A similar rule of assignment operates for the purposes of mortality analyses in classifying deaths among inmates of long-stay hospitals in the National Health Service which deal mainly with the chronic sick.

2. Persons dying within England and Wales who do not usually reside in this country - for example, merchant seamen - are classified according to the place where they died.

Definition of local area

Deaths are classified by area of residence in terms of the local units into which England and Wales is divided for the purposes of local government. There are 62 Administrative Counties and 83 County Boroughs: the Administrative Counties, excluding London, are further divided into Municipal Boroughs, Urban Districts and Rural Districts; London itself is divided into the City of London and 28 Metropolitan Boroughs. But, although the number of administrative sub-divisions amounts to nearly 1,500, there are only 174 local health authority areas, namely, the County Boroughs, the Administrative Counties, the London Metropolitan Boroughs and the City of London. The majority of the tables in which deaths are classified by place of residence are restricted to these local health authority areas.

For comparative purposes, it is often necessary to present the statistics in terms of wider regional groupings. To this end a grouping of the Counties and County Boroughs in England and Wales into ten " standard " regions, which has been accepted by a number of government departments, is employed. (See page ix for the detailed constitution of these regions.) The General Register Office for its own purposes often finds it convenient to go further and

* H.M.S.O., 1956, price £3. 5s. 0d. net.

to combine the nine " Standard Regions of England into three larger groupings so that, e.g., the aggregate experience of the ' North ' of England (Regions I, II and X) can be compared with the ' South ' (Regions V, VI and VII) ".

Certain areas of urban development, consisting of a number of towns and other local authority areas which have grown together and share common industrial, business and other interests, have also been defined by agreement between the major government departments. These areas are known as the conurbations; they are constituted as described on page x, and appear in a number of the tables. Conurbations are not autonomous units for the purposes of local government.

Tables in the Annual Review which show deaths by local areas

The only mortality tabulations published for the individual sub-divisions of administrative counties (municipal boroughs, urban districts and rural districts) relate to total deaths for each sex, deaths under 1 year and deaths under 4 weeks and to stillbirths (Table 12, Part I). For the individual local health authority areas there are tabulations of deaths from all causes by sex and detailed age (Table 15); and of deaths according to an abridged list of 71 causes by sex without distinction of age (Table 21). Deaths under one year are also tabulated by age, but without distinction of sex (Table 25).

Deaths in the standard regions and in the conurbations are classified by sex in a limited number of age-groups according to the abbreviated list of 50 causes as set out in the 6th Revision of the International Statistical Classification (Table 19).

Populations on which death rates are based

Three population estimates are published for England and Wales as a whole; namely: (1) the estimated Home Population (2) the estimated Total Population and (3) the estimated Civilian Population (Table I, Part I).

The population estimates published for local areas are home populations and these form the denominators for death rates unless it is stated otherwise. Table 12 of Part I shows the estimated home populations in each local administrative area as at the middle of 1954. Table 2, Part I, gives age and sex specific estimates of the home population in the Standard Regions and Conurbations.

An estimate of the number of children under 15 years of age in each local health authority area will be found (together with the home population) in the Registrar General's Quarterly Return (1st Quarter of 1954).

The conventions outlined earlier which determine the area of residence for certain categories of deaths generally also apply to the assignment of corresponding population categories when the population estimates are prepared.

Relationship between Hospital Regions and Standard Regions

The fourteen Hospital Regions into which England and Wales has been divided for the purposes of hospital administration in the National Health Service are also defined in terms of local administrative areas.* At the present time none of the tables published in the Statistical Review classify deaths by Hospital Region. Such tables can nevertheless be built up from Table 12 of Part I, which shows deaths according to the detailed administrative sub-divisions. For the purpose of vital statistics the four individual London Metropolitan hospital regions must be taken together as one unit.

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* see Hospitals Directory, England and Wales, 1952, pp. 1-5. H.M.S.O. price 10s. 6d. net.

Mortality Rates and Ratios—Definitions

The crude death rate for an area represents the total deaths of persons normally resident within the area, registered in England and Wales during the year, per thousand or per million of its home population at the middle of the year.

The risk of death becomes progressively greater with age from about twelve years onwards, so that the level of the crude death rate will be influenced by changes in the composition of the population at different ages. The crude death rate is accordingly an unreliable yardstick of the health or sanitary conditions prevailing in two or more localities unless it can first be shown that the populations concerned have a similar age and sex composition. Similarly, progressive changes in the birth rate or in the balance of immigration and emigration over a period of several years will vitiate the comparability of crude death rates in the same community at different points in time.

Within a limited period of two or three years, however, the annual variation in the crude rate for an area is a reasonable guide to the influence on mortality of seasonal factors such as abnormally cold or mild winters, or infectious disease epidemics.

Specific Death Rates

Death rates computed for defined classes of the population or for particular causes of death are known as *specific* death rates (e.g. age-specific, age-sex specific etc.). They are calculated by dividing the number of deaths of persons in the selected group by the corresponding number of persons in the mid-year population, with the exception of the various rates of perinatal and infant mortality, and the maternal mortality rate; these are based on the appropriate numbers of total births or live births.

Standardised Death Rates

From the medical point of view a chief concern of vital statistics has been to use death rates as indices to the healthiness or unhealthiness prevailing in particular towns or districts or as measures of the secular trend in the state of the public health. Crude death rates are therefore " adjusted " or " standardised " to compensate for differences in the age and sex composition of the population of the areas to be compared. There are several ways in which this can be done, but most of the techniques are variants on one or other of the two methods traditionally known as the " direct " and the " indirect ".

(a) **Direct standardisation.** This consists of calculating the total death rates which each of two or more given sets of age and sex specific rates would have produced in a " standard " or " selected " population of fixed age and sex constitution. These adjusted death rates can then be compared directly; any differences between them will not be attributable to age or sex differences in the population.

(b) **Indirect method.** By this method the standard of measurement is a mortality curve or a series of sex-age mortality rates instead of a standard population. The application of the standard (i.e. national) sex and age specific rates of census year to the local population, of which the sex and age constitution is known at census date, yields a number of deaths which, if divided by the local population, becomes an ' expected ' crude national death rate assuming that the national population structure is distorted to agree with the local population structure. If the local population is abnormally young (old) the ' expected ' rate thus obtained will be smaller

(larger) than the actual national crude rate, i.e. the local crude rate is smaller (larger) than it would be if the population structure of the area was the same as for the country as a whole, and it must always be increased (reduced) in the ratio of the actual national crude rate to the ' expected ' national rate before comparison is made with the national rate. These ratios when applied to local crude rates not only make the latter comparable with national rate but by the same token make them comparable with each other. The ratios when calculated as at census year are (except in special circumstances of rapid change) assumed to hold good until the local population structures can be re-examined at a succeeding census. This is the method underlying the calculation of area comparability factors (see below). Under this procedure the sex-age distribution of the actual deaths is not required and the preliminary work of ascertaining the sex-age rates necessary under the " direct " method is thus avoided.

Area Comparability Factors (A.C.F.) are given in Table 12 (Part I) for local authority areas to enable allowance to be made for differences in the sex and age composition of local populations when comparing mortality rates of different areas in the same year. The method of calculation of death A.C.F's (see also page 30) is as follows:—

The total population of England and Wales is first separated into the smallest number of sex and age groups consistent with reasonable accuracy in the resulting factor. The groups used are persons under 5, persons aged 5 to 34, males aged 35-54, 55-64, 65-74, 75-84, females of the same ages, and persons aged 85 and over. Sex and age death rates are then obtained by dividing the number of deaths in each group during the triennium 1950-52 by 3 times the corresponding 1951 Census population. These sex and age death rates are then each divided by a rate for persons of all ages, calculated on a similar basis to the sex and age rates to give a series of group weighting factors. To obtain the A.C.F. for any given area the 1951 Census population in each of the eleven sex and age groups is multiplied by the appropriate weighting factor and the products accumulated. The total population of the area divided by the result gives the area comparability factor. It should be noted that the A.C.F. does not specifically take account of the presence in the area of resident institutions for invalids.

The Comparative Mortality Index

The Comparative Mortality Index (C.M.I.) is used by the Registrar General to measure, in relation to the experience in a selected base year, the trend of mortality over a period of years in the country as a whole either from all causes of death or from selected individual causes. At the present time the year selected as base is 1938. The calculation of the index follows the principles described earlier for the " direct " method of standardisation, but there is no " fixed " standard population. Instead, the age-sex specific rates for the base year and the year with which it is to be compared are successively applied to a population the age structure of which is intermediate between the two, viz, the arithmetic mean of the proportionate age-sex distributions of the two populations. The ratio of the total deaths produced in this mean population by the age-sex specific death rates of the selected year to those produced by the " standard " set of rates (the 1938 experience) is the C.M.I.

The methods of calculation and a more detailed definition will be found on pages 6-11 of the Text for 1940-45 (Vol. I, Medical).

The General Trend of Mortality

Table XXIX (page 60) shows for each sex (a) the crude death rate for all ages, and (b) the comparative mortality index from 1841 to 1954. The rates in 1954 of 12·2 per 1,000 males and 10·5 per 1,000 females are based on registered deaths during the year, numbering 259,797 males and 242,099 females, respectively. As has been customary since 1950, the deaths of non-civilians are included. For the sexes combined, the crude rate of 11·3 per 1,000 in 1954 has been bettered only once before, 11·0 in 1948, and was equalled (11·3) in 1952. Despite these recent low rates there has been no substantial reduction in crude death rates during the past thirty years. Though large reductions in mortality have taken place at most ages the effects of these reductions have been counterbalanced, within the crude death rate, by the continuing trend of the population towards an older age structure. Making allowance for sex-age changes in the population the comparative mortality index indicates a reduction of mortality between 1938 and 1954 of 17 per cent for males and 24 per cent for females. Since 1904 the reduction of male mortality has been by 51 per cent, and of female mortality by 58 per cent.

Expectation of Life

The Expectation of Life is the average number of years of life that will be lived by a group of people of given age subject to a given mortality experience, usually the experience of a selected year or period of years, if that experience is reproduced in the future. The basis of the calculation of expectation of life is the Life Table.

No full English Life Table has been published since English Life Table No. 10 was published in 1936,* but in continuation of the series a full Table for the years 1950-1952 will be published shortly in the Decennial Supplement series. Abridged Life Tables have been published for years 1946 to 1953, the last two covering 3-year periods, and an abridged table for 1952-54 is given here as Table XXX (page 61). Expectation of life at birth, 67·31 years for boys and 72·68 for girls, increased by almost a year at age 1, after the high mortality risks of infancy had been passed, and thereafter slowly fell. The female advantage continued throughout the table, but became relatively less as age advanced, declining from over 5 years at birth to 3 years at 65 and rather less than a year at age 85.

The expectation of life at birth and at age 1 from each of the ten English Life Tables from 1841 to 1930-32 and from abridged tables from 1943 to 1954 are shown in Table XXXI (page 62). Between 1943 and 1954 the expectation of life at birth increased by five years and six years for males and females respectively, and at age 1 increased by four years and five years. Compared with 1841 the expectation of life of the newborn boy had increased by 27 years by 1952-54, and of the newborn girl by 31 years.

Quarterly Deaths and Death Rates

Numbers of deaths registered in England and Wales and death rates are given in Table 5 (Part I) by decennial periods from 1841 and by single years from 1944.

The range of seasonal variation in the mortality rate during the course of 1954 was similar to that of recent previous years that have been free from very cold weather or influenza epidemics during the first quarter. The excess

*Registrar General's Decennial Supplement, 1931, Part I, Life Tables, H.M.S.O. 1936, price 3s. 0d. net.

mortality of 24 per cent in the first quarter of 1954 contrasted with 39 per cent in 1953 and 53 per cent in 1951, years with a higher than usual epidemic of influenza.

Death Rates by Sex and Age

Table XXXIII (page 64) gives death rates by sex and age in groups of years from 1841 to 1954. A more detailed series appears as Table 4 of Part I. In comparison with 1841-50 the death rate (all ages) in each sex had approximately halved by 1954. Improvement was much greater in childhhod and adolescence than at higher ages. At each age the death rate of males was higher than that of females. While a male excess of mortality has always been observed at certain ages, e.g. 0-4 and over 45, the 5-14 age-group showed a small excess of female mortality up to about 1920, the 15-24 age-group had a female excess during 1841-1870, and the 25-44 age-group had an excess of female mortality in the period 1841-50 only. Recently the difference between the death rates of males and females in the middle and late adult ages has become very large. In 1954 at ages 45-64 the male rate of 13·5 per 1,000 compared with a female rate of 7·73; and in the next age-group, 65-84, the male rate was 73·7 compared with a female rate of 49·6. During the 30 or so years from 1921-25 to 1954 the male death rate at ages 45-64 declined by 20 per cent whereas the rate for females declined by 40 per cent.

Comparative Mortality in Different Parts of England and Wales

Death rates by sex and age for aggregates of conurbations, urban areas and rural districts within the broad regional divisions are shown in Table XXXV (page 67).

At most ages and in both sexes rates tended to be high in Wales and in the North of England and to be low in Greater London and the South of England. There was no regular difference in mortality between urban areas and rural districts, though in general the latter tended to be lower.

A detailed tabulation of death rates in individual local administrative areas of England and Wales is given in Table 12 of Part I, including adjustments for differences in the sex and age structure of local populations. In 1954 the death rates so adjusted (all ages) were 16 per cent higher than the national average in the West Yorkshire and South East Lancashire conurbations, and 15 per cent higher in the South Eastern section of Wales.

A rate 15 per cent below the national average was recorded in the Southern region, 12 per cent below in the Eastern region, 9 per cent below in Greater London, and 12 per cent below in the remainder of the South Eastern region.

Causes of Death at Different Ages

Death rates from selected causes (International Statistical Classification B List) by sex and age are shown in Table XXXIV (page 65). The corresponding numbers of deaths appear in Table 19 of Part I.

The causes of death at ages under 1 year are discussed in the next chapter (Infant Mortality).

At ages 1-4 the principal causes of death were motor vehicle and other accidents, pneumonia, and congenital malformations, the rate for the last showing a small excess of female over male mortality.

At ages 5-14 accidents were again responsible for a large proportion of the deaths, especially of boys. Other important causes of death were leukæmia, other neoplasms, pneumonia, and congenital malformations.

At 15-24 accidents were again the leading cause of male mortality. Other relatively frequent causes were tuberculosis, leukæmia, other neoplasms, chronic rheumatic heart disease, and nephritis.

At 25-44 accidents continued to occupy a prominent position amongst the causes of death of males, but other conditions of high frequency were tuberculosis, cancer of lung (males) and of breast (females), other neoplasms, chronic rheumatic heart disease, arteriosclerotic (coronary) heart disease (males), and suicide.

At 45-64 tuberculosis surpassed accidents as a cause of death of males, but much more frequently reported causes were cancer of lung and of several other sites, vascular lesions of the central nervous system, arteriosclerotic (coronary) heart disease, and bronchitis.

At 65-74 and at 75 and over the leading causes of death were broadly similar, and were cancer, vascular lesions of the central nervous system, arteriosclerotic (coronary) heart disease, degenerative heart disease, hypertension, pneumonia, bronchitis, prostatic hyperplasia, and accidents.

Table XXIX.—Crude annual death rates per 1,000 living and comparative mortality indices, 1841-1950 and 1941 to 1954

Period	Crude death rate per 1,000 living		Comparative Mortality Index* (1938 base)	
	M	F	M	F
1841–50 ..	23·1	21·6	2·12	2·44
1851–60 ..	23·1	21·4	2·09	2·37
1861–70 ..	23·7	21·4	2·14	2·37
1871–80 ..	22·7	20·1	2·09	2·27
1881–90 ..	20·3	18·1	1·93	2·10
1891–1900 ..	19·3	17·1	1·87	2·01
1901–10 ..	16·4	14·4	1·60	1·69
1911–20 ..	15·1	13·0	1·45	1·49
1921–30 ..	12·9	11·4	1·16	1·22
1931–40 ..	13·0	11·5	1·07	1·10
1941–1950 ..	14·1	11·0	0·92	0·89
1941	14·0	11·8	1·10	1·04
1942	12·5	10·5	0·97	0·92
1943	12·7	11·1	0·98	0·94
1944	12·6	10·7	0·95	0·89
1945	12·3	10·7	0·92	0·88
1946	12·2	10·9	0·89	0·88
1947	12·9	11·2	0·92	0·89
1948	11·5	10·1	0·82	0·79
1949	12·3	11·1	0·86	0·85
1950	12·3	11·0	0·85	0·83
1951	13·4	11·8	0·92	0·88
1952	12·2	10·5	0·84	0·78
1953	12·2	10·7	0·84	0·78
1954	12·2	10·5	0·83	0·76

* Based upon civilian mortality only, during the periods 1914-18 and 1939-49.

Table XXX.—Abridged Life Table, 1952-1954. England and Wales

Age x	Males		Females	
	l_x	$\overset{\circ}{e}_x$	l_x	$\overset{\circ}{e}_x$
0	10,000	67·31	10,000	72·68
1	9,702	68·37	9,768	73·40
2	9,682	67·51	9,751	72·53
3	9,671	66·59	9,741	71·60
4	9,662	65·65	9,734	70·65
5	9,654	64·71	9,729	69·69
10	9,628	59·87	9,710	64·82
15	9,606	55·00	9'693	59·93
20	9,566	50·22	9,670	55·07
25	9,508	45·52	9,637	50·25
30	9,450	40·78	9,593	45·46
35	9,379	36·07	9,536	40·72
40	9,282	31·42	9,458	36·04
45	9,134	26·89	9,340	31·46
50	8,881	22·58	9,164	27·02
55	8,436	18·64	8,898	22·75
60	7,738	15·10	8,506	18·68
65	6,731	11·98	7,908	14·91
70	5,408	9·30	7,001	11·51
75	3,871	7·00	5,682	8·61
80	2,267	5·19	3,937	6·31
85	962	3·84	2,104	4·63

This abridged life table is constructed from the estimated home population in 1952, 1953 and 1954, and the total deaths registered in those years.

The column headed l_x shows the numbers who would survive to exact age x out of 10,000 born who were subject throughout their lives to the death probabilities indicated by the 1952–1954 death records. Column $\overset{\circ}{e}_x$ is the " expectation of life ", that is, the average future lifetime which would be lived by persons aged exactly x, if likewise subject to these death probabilities.

Table XXXI.—Expectation of life at birth and at age 1 year, 1838-1932 and 1943 to 1954, England and Wales

From English Life Table	Year	Expectation of life at			
		Birth		Age 1 year	
		Male	Female	Male	Female
No. 1	1841	40	42	47	48
2	1838–44	40	42	47	47
3	1838–54	40	42	47	47
4	1871–80	41	45	48	50
5	1881–90	44	47	51	53
6	1891–1900	44	48	52	55
7	1901–10	49	52	56	58
8	1910–12	52	55	58	60
9	1920–22	56	60	60	63
10	1930–32	59	63	62	65
From annual Abridged Life Tables	1943	62	67	64	69
	1944	62	68	64	70
	1945	63	69	65	71
	1946	65	69	67	71
	1947	64	69	67	71
	1948	66	71	68	72
	1949	66	71	68	72
	1950	67	71	68	72
	1951	66	71	67	72
	1952	67	72	68	73
	1953	67	72	68	73
	1954	68	73	69	74
	1950–52	66	71	68	72
	1951–53	67	72	68	73
	1952–54	67	73	68	73

Table XXXII.—Annual death rates per 1,000 living, by quarters in each year 1931 to 1954, with ratios to each yearly rate taken as 100

Year	Death rate per 1,000 living				Ratio to yearly rate taken as 100			
	March	June	September	December	March	June	September	December
1931	16·5	11·5	9·6	11·7	*134*	*93*	*78*	*95*
1932	15·4	11·6	9·7	11·5	*128*	*97*	*81*	*96*
1933	17·1	10·8	9·4	12·0	*139*	*88*	*76*	*98*
1934	14·6	11·8	9·6	11·2	*124*	*100*	*81*	*95*
1935	13·2	12·0	9·8	12·0	*113*	*103*	*84*	*103*
1936	15·1	11·8	9·7	12·0	*125*	*98*	*80*	*99*
1937	16·2	11·6	9·7	12·3	*131*	*94*	*78*	*99*
1938	13·6	11·6	9·9	11·5	*117*	*100*	*85*	*99*
1939	15·1	11·7	9·9	11·8	*125*	*97*	*82*	*98*
1940	20·6	11·9	10·8	14·1	*143*	*83*	*75*	*98*
1941	18·4	14·2	10·1	11·5	*136*	*105*	*75*	*85*
1942	15·8	12·0	9·8	11·6	*128*	*98*	*80*	*94*
1943	14·5	11·7	10·1	15·7	*112*	*90*	*78*	*121*
1944	15·3	12·0	11·0	12·7	*120*	*94*	*87*	*100*
1945	16·5	11·5	10·0	12·6	*131*	*91*	*79*	*100*
1946	15·4	11·2	9·7	11·9	*128*	*93*	*81*	*99*
1947	17·6	11·3	9·2	11·4	*143*	*92*	*75*	*93*
1948	12·4	10·3	9·4	11·7	*113*	*94*	*85*	*106*
1949	15·2	11·2	9·3	11·8	*129*	*95*	*79*	*100*
1950	14·0	11·1	9·3	12·3	*120*	*95*	*80*	*106*
1951	19·1	11·1	9·1	11·0	*153*	*89*	*73*	*88*
1952	13·4	10·6	8·9	12·4	*119*	*94*	*79*	*110*
1953	15·8	10·4	8·9	10·7	*139*	*91*	*78*	*94*
1954	14·0	10·6	9·3	11·4	*124*	*94*	*82*	*101*

Table XXXIII.—Average annual death rates per 1,000 living by sex and age, 1841 to 1954

	Males								Females							
	All ages	0–	5–	15–	25–	45–	65–	85 and over	All ages	0–	5–	15–	25–	45–	65–	85 and over
1841–1850 ..	23·1	71·3	7·24	8·23	11·2	23·6	89·6	312·3	21·6	61·2	7·27	8·50	11·6	21·1	82·4	293·2
1851–1860 ..	23·1	72·7	6·79	7·71	10·9	23·2	86·8	308·3	21·4	63·0	6·84	7·98	10·9	20·1	80·0	289·0
1861–1870 ..	23·7	73·5	6·43	7·26	11·5	24·8	87·7	315·0	21·4	63·7	6·25	7·30	10·7	20·6	79·8	285·0
1871–1880 ..	22·7	68·4	5·29	6·24	11·3	26·1	90·2	327·4	20·1	58·3	5·05	6·12	9·92	21·0	80·9	296·4
1881–1890 ..	20·3	61·6	4·20	4·97	9·79	25·5	89·4	306·0	18·1	51·9	4·23	4·97	8·76	20·6	78·9	271·0
1891–1900 ..	19·3	62·7	3·40	4·38	8·82	25·2	89·4	286·7	17·1	52·8	3·49	4·06	7·58	20·3	79·5	261·3
1901–1905 ..	17·1	54·7	2·93	3·77	7·59	23·0	83·4	274·6	15·0	45·8	3·03	3·34	6·34	18·1	72·5	249·4
1906–1910 ..	15·6	45·4	2·67	3·45	6·76	21·7	82·0	283·0	13·8	38·0	2·78	3·05	5·60	16·9	70·8	250·9
1911–1915 ..	15·5	40·9	2·75	3·69	6·76	21·0	81·7	281·6	13·3	34·0	2·75	3·00	5·17	16·0	69·5	245·4
1916–1920 ..	14·9	34·4	3·11	4·85	7·61	19·5	81·1	267·8	12·8	28·4	3·18	4·06	5·91	14·4	65·9	241·9
1921–1925 ..	12·9	27·0	2·10	3·06	5·24	16·9	76·2	272·7	11·4	21·8	2·05	2·83	4·26	12·8	64·0	241·2
1926–1930 ..	12·9	23·1	2·06	2·93	4.84	17·0	76·3	298·1	11·4	18·5	1·90	2·67	3·97	12·4	62·5	254·4
1931–1935 ..	12·7	20·1	1·84	2·81	4·23	16·6	75·1	278·9	11·4	16·0	1·71	2·51	3·67	11·9	61·0	245·0
1936–1940 ..	13·3	17·5	1·60	2·64	3·95	17·3	76·2	286·9	11·6	13·7	1·40	2·17	3·22	11·5	60·1	253·0
1941–1945 ..	12·8	15·5	1·44	2·99	3·72	15·7	69·0	227·0	10·9	12·3	1·13	1·98	2·84	9·86	52·6	207·0
1946–1950 ..	12·2	10·5	0·79	1·42	2·58	14·5	69·9	241·6	10·9	8·14	0·59	1·29	2·17	8·79	52·1	208·9
1951 ..	13·4	7·35	0·61	1·13	2·30	15·1	80·9	307·8	11·8	5·68	0·41	0·77	1·82	8·79	57·7	249·1
1952 ..	12·2	7·02	0·54	1·12	2·10	13·8	72·9	265·1	10·5	5·45	0·38	0·64	1·60	8·04	50·2	212·3
1953 ..	12·2	7·06	0·52	1·00	1·98	13·7	73·9	258·1	10·7	5·62	0·38	0·57	1·59	7·87	50·7	218·8
1954 ..	12·2	6·69	0·46	0·97	1·95	13·5	73·7	249·6	10·5	5·10	0·33	0·54	1·54	7·73	49·6	209·7

Table XXXIV.—Death rates by Sex from Certain Causes at Different Periods of Life, England and Wales, 1954

(Classified in accordance with the International Abbreviated List with certain sub-divisions)

Abbreviated List Nos.	Cause of death		All ages	Under 4 weeks	4 weeks and under 1 year	1–	5–	15–	25–	45–	65–	75 and over
			Rates per million living	Rates per 1,000 related live births		Rates per million living						
	Estimated mid-year population (in thousands)	M	21,288	*346455,**		1,360	3,389	2,716	6,286	5,169	1,380	645
		F	22,986	*327,196**		1,296	3,240	2,820	6,416	5,855	1,948	1,084
	ALL CAUSES	M	**12,204**	**20·17**	**8·51**	**1,056**	**457**	**968**	**1,953**	**13,478**	**53,338**	**137,482**
		F	**10,532**	**15·14**	**6·83**	**822**	**327**	**544**	**1,539**	**7,732**	**31,635**	**105,592**
B1	Tuberculosis of respiratory system	M	232	*0·00*	*0·02*	*7*	*1*	35	160	481	778	406
		F	92	*0·00*	*0·02*	*9*	*3*	58	144	105	137	117
B2	Tuberculosis, other forms	M	21	—	*0·05*	30	7	15	18	26	38	40
		F	17	—	*0·02*	23	9	15	12	18	31	25
B3	Syphilis and its sequelae	M	45	—	*0·00*	—	*0*	*0*	8	78	255	225
		F	20	*0·00*	—	*1*	*0*	*1*	*3*	28	82	113
B4	Typhoid fever	M	*0*	—	—	—	—	—	—	—	*1*	—
		F	*0*	—	—	—	—	—	—	*0*	*1*	*1*
B5	Cholera	M	—	—	—	—	—	—	—	—	—	—
		F	—	—	—	—	—	—	—	—	—	—
B6	Dysentery, all forms	M	1	*0·00*	*0·01*	*1*	*1*	*1*	*0*	*1*	*1*	*8*
		F	*1*	—	*0·01*	*1*	—	*1*	—	*0*	*2*	*6*
B7	Scarlet fever and streptococcal sore throat	M	1	—	*0·01*	*1*	*1*	*0*	*1*	*1*	*1*	*2*
		F	1	—	*0·00*	—	*1*	*0*	*1*	*2*	*2*	*4*
B8	Diphtheria	M	*0*	—	*0·00*	*1*	*0*	—	—	—	—	—
		F	*0*	—	—	*2*	*0*	—	—	*0*	*1*	*1*
B9	Whooping cough	M	3	—	0·14	*10*	*1*	—	—	—	*1*	—
		F	3	*0·01*	0·13	16	*1*	—	—	—	*1*	*3*
B10	Meningococcal infections	M	6	*0·01*	0·17	35	*2*	*1*	*1*	*1*	*3*	*2*
		F	5	*0·00*	0·13	34	*2*	—	*1*	*2*	*4*	*4*
B11	Plague	M	—	—	—	—	—	—	—	—	—	—
		F	—	—	—	—	—	—	—	—	—	—
B12	Acute poliomyelitis	M	3	*0·00*	*0·01*	*6*	6	*4*	4	*1*	*1*	—
		F	2	—	*0·01*	*5*	*2*	*3*	*2*	*1*	*1*	—
B13	Smallpox	M	—	—	—	—	—	—	—	—	—	—
		F	—	—	—	—	—	—	—	—	—	—
B14	Measles	M	1	—	*0·03*	*9*	*1*	*0*	*0*	—	—	—
		F	1	—	*0·01*	*6*	*2*	*0*	*0*	—	—	—
B15	Typhus and other rickettsial diseases	M	—	—	—	—	—	—	—	—	—	—
		F	—	—	—	—	—	—	—	—	—	—
B16	Malaria	M	*0*	—	*0·00*	—	—	—	*1*	*1*	*1*	—
		F	—	—	—	—	—	—	—	—	—	—
B17	All other diseases classified as infective and parasitic	M	24	*0·01*	0·12	22	12	9	14	33	43	85
		F	21	*0·01*	0·09	19	10	7	16	22	33	68
	Malignant neoplasms (140–205)	M	2,223	*0·01*	0·06	115	64	105	373	3,567	10,914	16,721
		F	1,861	*0·01*	0·07	80	52	72	449	2,629	6,305	10,819
	Malignant neoplasm of stomach (151)	M	369	—	—	*1*	—	*1*	49	563	1,981	2,933
		F	273	—	—	—	—	*2*	28	283	1,074	2,152
	Malignant neoplasm of trachea, bronchus and lung (162, 163)	M	657	—	—	*1*	*0*	*5*	101	1,536	3,040	1,882
		F	102	—	—	—	—	*2*	25	173	379	386
	Malignant neoplasm of breast (170)	M	4	—	—	—	—	—	*1*	6	19	*29*
		F	364	—	—	—	—	*1*	129	626	1,060	1,659
B18	Malignant neoplasm of uterus (171-174)	F	167	—	—	*1*	—	*1*	56	308	520	613
	Leukæmia and aleukæmia (204)	M	54	—	*0·03*	56	28	24	28	68	180	181
		F	44	*0·00*	*0·03*	36	21	20	21	54	125	129
	Other malignant and lymphatic neoplasms (Remainder of 140-205)	M	1,139	*0·01*	*0·02*	57	36	74	195	1,395	5,694	11,695
		F	912	*0·01*	*0·04*	43	31	45	190	1,185	3,147	5,880
B19	Benign and unspecified neoplasms	M	37	*0·02*	*0·03*	*14*	9	10	17	68	104	161
		F	41	*0·04*	*0·02*	*12*	7	8	27	66	90	118
B20	Diabetes mellitus	M	49	—	*0·01*	*1*	*1*	*6*	11	38	265	614
		F	86	—	—	*4*	*3*	10	10	71	398	630
B21	Anæmias	M	29	—	*0·02*	*4*	*4*	*4*	*3*	21	130	412
		F	50	—	*0·01*	*6*	*3*	*3*	6	31	170	523
B22	Vascular lesions affecting central nervous system	M	1,433	*0·00*	*0·03*	*1*	7	20	81	1,181	7,195	21,516
		F	1,811	*0·00*	*0·01*	*3*	*5*	12	88	1,136	6,365	20,255
B23	Nonmeningococcal meningtis	M	10	0·06	0·16	*12*	*3*	*2*	3	10	14	*19*
		F	6	*0·04*	0·09	*15*	*2*	*1*	*2*	4	11	*8*
B24	Rheumatic fever	M	7	—	—	*3*	10	9	7	5	*8*	*12*
		F	6	—	*0·00*	*1*	11	*6*	7	4	*6*	*11*
B25	Chronic rheumatic heart disease	M	148	—	—	*1*	*5*	34	101	247	483	715
		F	237	—	—	—	*6*	31	147	364	623	972

Table XXXIV.—*continued.*

Abbreviated List Nos.	Cause of death		All ages	Under 4 weeks	4 weeks and under 1 year	1–	5–	15–	25–	45–	65–	75 and over
			Rates per million living	Rates per 1,000 related live births		Rates per million living						
B26	Arteriosclerotic heart diseases, including coronary disease (420)	M	1,991	—	—	—	—	*3*	193	2,913	10,751	17,481
		F	1,066	—	—	—	—	*0*	28	740	4,758	9,904
	Degenerative heart disease (421, 422)	M	1,334	—	—	*1*	*2*	*5*	24	450	4,964	29,533
		F	1,688	—	*0·01*	—	*2*	*3*	19	316	3,580	27,530
B27	Other diseases of heart	M	189	*0·00*	*0·02*	*1*	*2*	*6*	27	184	920	2,491
		F	178	*0·00*	*0·02*	—	*2*	9	16	119	623	1,882
B28	Hypertension with heart disease	M	260	—	—	—	—	*1*	10	229	1,452	3,543
		F	282	—	—	—	—	*1*	7	167	1,106	3,035
B29	Hypertension without mention of heart	M	184	—	—	—	—	*3*	23	192	896	2,377
		F	185	—	—	—	*1*	*3*	18	129	653	1,937
B46 (Pt)	Other circulatory diseases (450–468)	M	334	*0·00*	*0·01*	*3*	*1*	*4*	18	192	1,343	6,411
		F	343	—	*0·01*	*1*	*1*	8	20	128	869	4,879
B30	Influenza	M	41	*0·01*	*0·05*	*4*	*3*	8	11	49	145	456
		F	41	*0·01*	*0·02*	*8*	*2*	7	7	29	111	418
B31	Pneumonia	M	435	—	2·64	158	24	21	44	342	1,635	5,702
		F	384	—	2·18	109	26	21	41	182	946	4,295
B32	Bronchitis	M	804	*0·05*	0·53	43	7	*6*	38	977	4,347	8,583
		F	366	*0·02*	0·39	30	7	*5*	16	201	1,133	4,358
B46 (Pt)	Other diseases of respiratory system (470–475, 510–527)	M	162	*0·04*	0·13	29	10	10	30	267	747	1,082
		F	66	*0·02*	0·10	15	13	9	18	60	153	577
B33	Ulcer of stomach and duodenum	M	188	*0·01*	*0·01*	*2*	—	*5*	35	269	950	456
		F	64	*0·01*	—	*1*	—	*1*	9	58	232	565
B34	Appendicitis	M	26	*0·01*	*0·00*	18	13	11	10	33	85	149
		F	18	—	—	*13*	9	*6*	5	17	55	105
B35	Intestinal obstruction and hernia	M	69	0·25	0·16	21	*4*	*3*	7	72	293	690
		F	63	0·17	0·12	*6*	*2*	*1*	7	45	200	577
B36	Gastritis, enteritis and diarrhœa except diarrhœa of newborn	M	45	*0·00*	0·72	34	*3*	*4*	12	39	125	310
		F	55	—	0·55	31	*0*	*6*	14	41	138	395
B37	Cirrhosis of liver	M	30	*0·01*	*0·01*	*1*	*1*	*1*	11	57	117	140
		F	23	—	*0·01*	*2*	*2*	*1*	7	44	75	66
B38	Nephritis and nephrosis	M	129	*0·01*	*0·00*	*13*	15	39	67	185	432	912
		F	110	—	*0·03*	*8*	14	35	44	128	329	640
B39	Hyperplasia of prostate	M	204	—	—	—	—	—	*0*	58	893	4,343
B40	Complications of pregnancy, childbirth and puerperium	F	21	—	—	—	—	29	59	*3*	*1*	*1*
B41	Congenital malformations	M	110	3·07	1·67	99	24	31	23	33	39	53
		F	93	3·02	1·62	103	26	15	18	25	32	33
B42	Birth injuries, postnatal asphyxia and atelectasis	M	127	7·72	0·06	*1*	—	—	—	—	—	—
		F	72	4·97	0·06	—	—	—	—	—	—	—
B43	Diarrhœa of newborn (764)	M	1	0·06	—	—	—	—	—	—	—	—
		F	*1*	*0·06*	—	—	—	—	—	—	—	—
	Other infections of newborn (763, 765–768)	M	24	1·45	*0·02*	—	—	—	—	—	—	—
		F	14	0·99	*0·02*	—	—	—	—	—	—	—
B44	Other diseases of early infancy, and immaturity unqualified	M	116	6·97	0·13	*4*	—	—	—	—	—	—
		F	78	5·39	0·09	2	—	—	—	—	—	—
B45	Senility without mention of psychosis, ill-defined and unknown causes	M	143	*0·04*	0·06	*4*	*1*	*2*	*2*	8	136	4,281
		F	230	*0·04*	*0·03*	*6*	*0*	*1*	*2*	4	121	4,597
B46 (Rem)	All other diseases (Remainder 001–795)	M	388	0·17	0·63	108	45	73	128	480	1,577	3,140
		F	469	0·13	0·45	101	33	65	147	519	1,478	3,053
BE47	Motor vehicle accidents	M	161	—	*0·01*	90	70	259	141	145	259	564
		F	51	—	*0·00*	55	32	37	23	46	120	218
BE48	All other accidents	M	275	0·17	0·77	142	89	169	172	254	547	2,208
		F	222	0·17	0·50	86	33	27	31	94	461	2,715
BE49	Suicide and self-inflicted injury	M	149	—	—	—	*1*	43	119	278	430	439
		F	81	—	—	—	—	18	65	149	198	130
BE50	Homicide and operations of war	M	8	*0·03*	*0·02*	*4*	*4*	*5*	4	14	19	*3*
		F	5	*0·02*	*0·03*	*8*	*4*	*5*	4	*3*	*5*	*4*
BN47	Fractures, head injuries and internal injuries	M	321	*0·01*	*0·03*	107	93	344	249	309	604	2,200
		F	190	*0·01*	*0·02*	61	40	45	32	78	408	2,359
BN48	Burns	M	12	*0·01*	*0·02*	18	*4*	*4*	5	9	29	115
		F	21	—	*0·01*	37	11	*6*	4	10	49	183
BN49	Effects of poisons	M	107	*0·02*	*0·02*	20	*5*	35	81	182	291	411
		F	89	*0·02*	*0·01*	17	*5*	20	60	144	216	286
BN50	All other injuries	M	154	0·16	0·73	90	63	92	101	190	333	488
		F	58	0·17	0·48	35	13	15	26	60	111	239

* Live birth occurrences

Table XXXV.—All Causes: Death rates per 1,000 living by sex and age in standard regions and aggregates summary (by type of area) within regional groups, 1954

	Males						Females					
	0–	5–	15–	45–	65 & over	All ages	0–	5–	15–	45–	65 & over	All ages
ENGLAND AND WALES ..	**6·69**	**0·46**	**1·66**	**13·5**	**80·1**	**12·2**	**5·10**	**0·33**	**1·24**	**7·73**	**58·1**	**10·5**
Aggregates summary (by type of area)												
Conurbations	6·35	0·41	1·64	14·1	81·5	11·9	4·85	0·28	1·22	7·66	57·2	10·0
Areas outside conurbations:												
Urban areas with populations of 100,000 and over ..	6·86	0·40	1·61	14·5	83·1	12·4	5·27	0·32	1·27	7·97	58·1	10·5
Urban areas with populations of 50,000 and under 100,000	7·15	0·53	1·67	13·6	78·8	12·4	5·05	0·33	1·30	7·70	56·5	10·9
Urban areas with populations under 50,000	7·13	0·48	1·73	13·3	81·2	13·0	5·41	0·37	1·23	7·86	59·2	11·2
Rural Districts	6·55	0·53	1·62	11·7	75·7	11·6	5·10	0·37	1·22	7·59	59·1	10·7
NORTH OF ENGLAND												
Regions:												
Northern	7·71	0·51	1·91	14·8	83·0	12·6	6·17	0·34	1·39	8·42	64·5	10·6
East and West Ridings ..	7·37	0·44	1·80	14·4	86·5	13·1	5·27	0·36	1·27	8·34	63·7	11·1
North Western	7·47	0·52	1·92	15·8	88·3	13·5	5·87	0·35	1·45	8·77	63·3	11·5
Total	7·50	0·49	1·88	15·1	86·5	13·2	5·77	0·35	1·38	8·57	63·7	11·2
Conurbations:												
Tyneside	8·08	0·55	1·96	15·9	83·1	12·9	5·91	0·40	1·46	8·11	63·7	10·3
West Yorkshire	7·28	0·38	1·79	15·5	90·9	14·1	5·43	0·32	1·22	8·63	66·5	12·3
South East Lancashire ..	7·18	0·49	1·99	16·2	88·5	13·5	5·69	0·31	1·45	8·97	64·0	11·6
Merseyside	8·13	0·38	1·91	16·3	90·0	12·4	6·18	0·32	1·46	8·40	59·3	9·98
Total	7·56	0·44	1·91	16·0	88·7	13·4	5·77	0·32	1·40	8·65	63·7	11·2
Areas outside conurbations:												
Urban areas with populations of 100,000 and over ..	7·63	0·49	1·88	15·5	86·5	13·2	5·60	0·37	1·29	8·56	62·0	10·8
Urban areas with populations of 50,000 and under 100,000	8·43	0·61	2·05	14·8	84·1	13·4	5·77	0·30	1·46	8·28	63·1	11·3
Urban areas with populations under 50,000	7·32	0·52	1·83	14·7	87·0	13·7	5·94	0·43	1·40	8·54	65·2	11·5
Rural Districts	6·86	0·54	1·78	12·7	79·7	11·8	5·61	0·34	1·36	8·45	63·8	10·8
MIDLANDS AND EASTERN												
Regions:												
North Midland	7·08	0·46	1·71	12·2	77·6	11·6	5·11	0·33	1·28	7·68	57·8	10·0
Midland	7·15	0·43	1·63	13·9	81·8	11·4	5·41	0·35	1·31	7·92	60·1	9·80
Eastern	5·69	0·45	1·47	11·0	74·2	11·4	4·60	0·32	1·14	6·88	54·7	10·3
Total	6·71	0·44	1·61	12·5	78·0	11·5	5·09	0·34	1·26	7·54	57·6	10·0
Conurbation:												
West Midlands	6·63	0·43	1·74	14·5	83·3	11·3	5·22	0·26	1·29	7·91	59·8	9·48
Areas outside conurbation:												
Urban areas with populations of 100,000 and over ..	6·62	0·35	1·56	13·3	80·9	11·6	4·97	0·28	1·27	7·63	56·5	9·84
Urban areas with populations of 50,000 and under 100,000	6·78	0·48	1·53	12·3	75·2	10·9	4·59	0·33	1·30	7·39	54·5	9·37
Urban areas with populations under 50,000	6·95	0·44	1·62	12·4	78·7	12·2	5·45	0·37	1·20	7·55	56·8	10·4
Rural Districts	6·56	0·50	1·56	10·7	73·5	11·1	4·93	0·39	1·25	7·23	58·8	10·4
GREATER LONDON	5·19	0·37	1·42	12·6	75·5	11·0	3·94	0·25	1·07	6·84	51·9	9·24
SOUTH OF ENGLAND												
Regions:												
Remainder of South East ..	6·01	0·46	1·51	11·9	75·6	13·1	4·61	0·37	1·10	6·85	54·6	11·9
Southern	6·39	0·47	1·31	12·1	72·2	11·0	4·59	0·27	0·96	6·86	52·5	10·2
South Western	6·34	0·54	1·62	12·8	78·8	12·6	4·48	0·39	1·10	7·69	57·7	11·6
Total	6·26	0·49	1·48	12·3	75·7	12·2	4·56	0·34	1·05	7·16	55·1	11·2
Urban areas with populations of 100,000 and over ..	6·19	0·41	1·28	13·8	79·2	12·2	4·56	0·31	1·15	7·34	54·4	10·9
Urban areas with populations of 50,000 and under 100,000	5·83	0·52	1·40	13·2	76·2	12·7	4·64	0·37	1·09	7·34	53·3	12·0
Urban areas with populations under 50,000	6·57	0·48	1·62	12·3	75·8	12·8	4·48	0·34	1·04	7·08	55·4	11·5
Rural Districts	6·15	0·54	1·49	11·1	73·5	11·5	4·60	0·35	1·00	7·07	56·0	10·8
WALES (including Monmouthshire)												
Regions:												
Wales I and II	7·84	0·47	2·03	15·2	86·6	14·0	6·50	0·34	1·47	8·94	63·8	11·3
Urban area with populations of 100,000 and over ..	7·14	0·29	1·88	16·7	89·6	13·6	6·81	0·30	1·45	9·00	62·4	10·6
Urban area with population of 50,000 and under 100,000	13·3	0·22	2·72	16·9	82·4	15·9	8·26	—	2·30	9·88	63·3	11·6
Urban areas with populations under 50,000	8·29	0·48	2·07	14·6	88·2	14·2	6·22	0·27	1·36	8·94	63·7	11·3
Rural Districts	7·33	0·60	2·02	14·7	84·3	13·9	6·50	0·48	1·60	8·86	64·4	11·7

INFANT MORTALITY AND STILLBIRTHS

During 1954, 354,922 boys and 334,929 girls were born; of these 8,467 boys and 7,733 girls were stillborn. There was one illegitimate boy and one illegitimate girl in every 20 male and female births respectively.

Of every 1,000 boys born, 24 were stillborn and 28 died before their first birthday; of the girl babies 23 were stillborn and 22 died when less than a year old.

Whereas the infant mortality rate of 25·4 per 1,000 related live births was 5 per cent lower than in 1953, the stillbirth rate per 1,000 live and stillbirths occurring in the year increased 5 per cent from 22·4 in 1953 to 23·5 in 1954. The death rate in the first six days of life increased from 14·8 in 1953 to 14·9 in 1954. The rates from 1949 to 1954 as percentages of those in 1948 were as follows:—

	Rates in 1948	Rates per cent of those in 1948					
		1949	1950	1951	1952	1953	1954
Stillbirths per 1,000 total births	23·2	*98*	*97*	*99*	*98*	*97*	*101*
Early neonatal deaths (0–6 days) per 1,000 related live births	15·6	*100*	*97*	*99*	*97*	*95*	*96*
Late neonatal deaths (7–27 days) per 1,000 related live births	4·1	*90*	*80*	*80*	*78*	*71*	*68*
Post-neonatal deaths (4 weeks and under 1 year) per 1,000 related live births	14·2	*92*	*78*	*77*	*65*	*64*	*54*

The stillbirth and early neonatal mortality rates continue to show little improvement, whereas in less than a decade the late neonatal and post-neonatal death rates have been reduced by nearly one third and one half.

The rates shown in the present series of tables all relate to the calendar year unless otherwise specified and conform to the following definitions:—

Infant Mortality Rate—Deaths among liveborn infants at ages under 1 year per 1,000 related live births.

Neonatal Mortality Rate—Deaths among liveborn infants under 4 weeks of age per 1,000 related live births.

(*a*) *Early Neonatal Mortality Rate*—Deaths among liveborn infants under 1 week of age per 1,000 related live births;

(*b*) *Late Neonatal Mortality Rate*—Deaths among liveborn infants aged 1 week but under 4 weeks per 1,000 related live births.

Post-neonatal Mortality Rate—Deaths among liveborn infants aged four weeks but under 1 year of age per 1,000 related live births.

Stillbirth Rate (*Late Foetal Mortality Rate*)—Births at or over 28 weeks gestation which are not liveborn, per 1,000 births (live and still).

Perinatal Mortality Rate—Stillbirths and deaths under 1 week per 1,000 total births.

Secular trends in stillbirths and infant mortality

The secular trend in the stillbirth and infant mortality rates appears in Table XL (page 87). There was a slight reduction in the " birth wastage " (stillbirths plus infant deaths per 1,000 total births) from 48·6 in 1953 to 48·4 in 1954. A decrease from 11·7 to 10·3 in the infantile death rate at one week and over was offset by an increase from 36·9 to 38·1 in the perinatal mortality rate. Stillbirth and infant mortality rates among illegitimate children have been consistently higher than the corresponding rates for all infants during the period 1940 to 1954 (see Table XLIII, page 92). The proportionate decrease in the stillbirth rate by 1954, measured from the average rates during 1936 to 1939 as 100, was 41 per cent for illegitimate children compared with 39 per cent for all stillbirths. The decrease in the early neonatal death rate was 41 per cent for illegitimate as compared with 31 per cent for all infants. The post-neonatal mortality rate declined 80 per cent among illegitimate compared with 70 per cent among all children.

Causes of infant mortality

Causes of stillbirth are not registered in this country, but an examination of the main certified causes of infant mortality is enlightening despite admitted difficulties in accurately determining the causes of death of young infants. The secular trend in the death rates of infants under one year of age per 1,000 related live births was as follows:—

	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
Hæmorrhagic conditions (I.S.C. Nos. 295, 296, 771)	0·49	0·46	0·37	0·45	0·32	0·27	0·29	0·35	0·28	0·30	0·34
Respiratory diseases :											
Pneumonia	7·42	8·17	7·20	7·22	5·77	5·40	4·63	5·09	4·48	4·31	3·53
Bronchitis	1.43	1·45	1·11	0·89	0·76	0·65	0·67	0·67	0·56	0·63	0·49
Gastro-enteritis	4·75	5·12	4·24	5·13	2·90	2·59	1·63	1·22	1·01	0·97	0·68
Immaturity	10·72	9·69	10·07	8·46	7·38	6·79	5·99	5·70	5·35	5·18	4·76
Congenital Malformations :											
Spina Bifida, meningocele	1·70	1·55	1·56	1·13	1·06	1·15	1·03	1·17	1·27	1·17	1·43
Hydrocephalus	0·26	0·27	0·24	0·26	0·21	0·22	0·29	0·17	0·23	0·18	0·20
Heart	1·73	1·80	1·70	1·64	1·40	1·43	1·55	1·44	1·50	1·53	1·58
Genito-urinary system	0·12	0·13	0·14	0·12	0·12	0·14	0·16	0·13	0·15	0·14	0·16
Others	1·38	1·45	1·47	1·41	1·35	1·34	1·31	1·29	1·41	1·27	1·32
Birth Injury	2·37	2·66	2·72	2·74	2·60	2·61	2·61	2·87	2·78	2·68	2·75
Postnatal asphyxia and atelectasis	1·96	2·77	2·92	2·90	2·75	3·28	3·34	3·58	3·64	3·64	3·70

There has been a marked reduction during the last decade in the death rates from pneumonia and bronchitis and from gastro-enteritis, which has contributed to the decline in the post-neonatal death rates. Improved care has reduced the death rate from immaturity by 56 per cent, but little reduction appears in the rates for congenital malformations. Deaths certified as due to birth injuries have increased slightly and the mortality rate from postnatal asphyxia and atelectasis has risen by nearly 90 per cent.

Causes of death at different age-periods

In 1954, 59 per cent of all deaths under 1 year of age occurred in the first week of life, and 70 per cent during the first four weeks. Nearly four fifths of deaths in the first week were due to conditions which for the most part arise before or during birth (Table XXXVI, page 80, prenatal and natal causes), and another 13 per cent were due to congenital malformations. The proportion of first week deaths attributed to immaturity alone or primary to other diseases of early infancy was 30 per cent, compared with 32 per cent in 1952 and 1953. Erythroblastosis accounted for 40 deaths per 1,000 in 1954 compared with 35 in 1953, and haemorrhagic disease of the newborn increased from 15 per 1,000 in 1952 to 16 in 1953 and 19 in 1954. After the first week of life infants are more subject to the diseases of their environment, pneumonia and bronchitis causing 33 per cent of the deaths of children aged from 7 days to a year, infective diseases causing 9 per cent and gastroenteritis, 6 per cent (see Table XXXVI, page 80, Postnatal causes). There were only 10 deaths from tuberculous meningitis in 1954 compared with 181 in 1945.

Infant mortality rates for boys were about one third or more in excess of those for girls for most causes, except in the case of congenital malformations where the rates of 4·74 and 4·64 for males and females differed only slightly (see Table XXXVII, page 82). The rate for boys dying of intracranial and spinal injury at birth was 64 per cent higher than that for girls. The percentage distribution of deaths in the first year of life was as follows:—

		Infant Mortality Rate	Percentage distribution of deaths					
			Total	Under 1 day	1 day and under 1 week	1 week and under 1 month	1 month and under 3 months	3 months and under 1 year
All causes	**M**	**28·68**	**100**	**29**	**30**	**11**	**12**	**18**
	F	**21·97**	**100**	**30**	**27**	**12**	**12**	**19**
Congenital malformations	M	4·74	100	15	27	23	17	18
	F	4·64	100	19	23	23	16	19
Other prenatal and natal causes	M	14·89	100	49	44	6	1	0
	F	10·51	100	53	40	6	1	0
Postnatal causes	M	7·49	100	2	10	12	27	49
	F	5·65	100	3	8	13	28	48
Unclassified	M	1·55	100	8	15	11	21	45
	F	1·18	100	14	14	8	20	44
Immaturity alone; or with mention of immaturity	P	9·09	100	51	41	7	1	—

A slightly larger proportion of girls than of boys died in the first day. Of those whose deaths were entirely or primarily due to immaturity or in whom immaturity was associated with a disease of early infancy (I.S.C. Nos. 760·5-773·5) 92 per cent died in the first week and none survived three months.

Cause analyses of infant mortality are shown by quarters of the year in Table XXXVIII (page 84).

Areal infant mortality

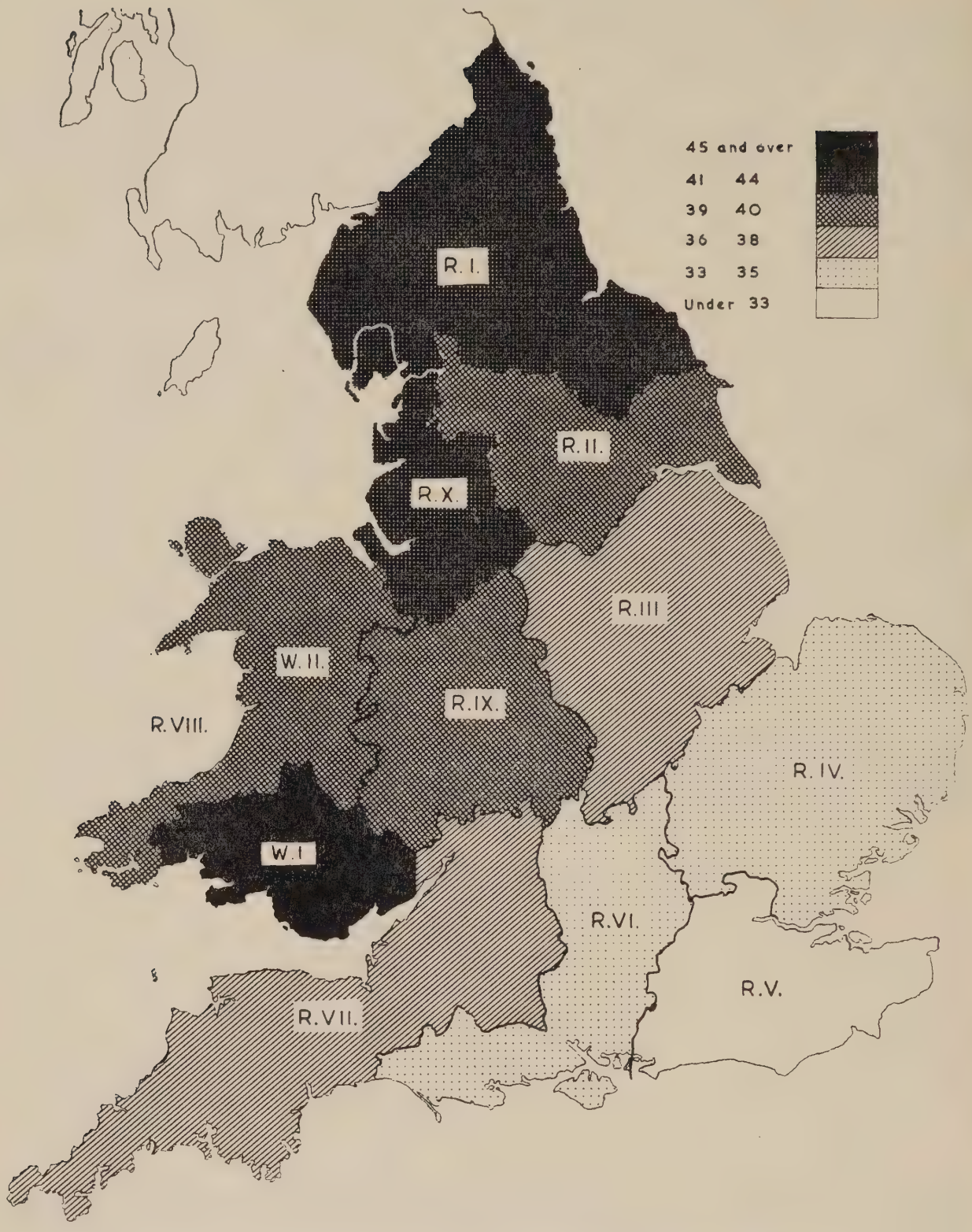
Infant mortality in the standard regions and conurbations is shown in Table XXXIX (page 86). Among the regions Wales I, comprising the counties of Brecknock, Carmarthen, Glamorgan and Monmouth, had the highest rates in the country for total infant mortality, early and late neonatal and post-neonatal mortality and for stillbirths, whereas London and the South

Eastern region had the lowest of these rates. While some variation is to be expected, it is a matter for concern that the worst regional infant mortality rate (33·22 per 1,000 related live births) should be 64 per cent higher than the best (20·29). Comparison with the rates in 1950 shows that in Wales I the late neonatal death rate has decreased by 4 per cent in the four years and the post-neonatal death rate by 21 per cent. Against this must be set increases of 5 per cent in both the stillbirth and early neonatal death rates. In the remainder of Wales these two rates both decreased by 12 per cent between 1950 and 1954.

Region	Variations in mortality rates for 1954 from rates in 1950							
	Stillbirths		Early neonatal		Late neonatal		Post-neonatal	
	Actual	Per cent	Actual	Per cent	Actual	Per cent	Actual	Per cent
Northern	—1·0	*—4*	+0·3	*+2*	—0·7	*—17*	—7·7	*—46*
East and West Ridings ..	+2·1	*+9*	—0·1	*—1*	—1·3	*—33*	—3·6	*—27*
North Western	+2·4	*+10*	+0·3	*+2*	—0·4	*—11*	—5·2	*—37*
North Midland	+1·1	*+5*	—0·7	*—5*	—0·3	*—9*	—3·7	*—32*
Midland	+0·6	*+3*	+0·1	*+1*	—0·1	*—3*	—3·9	*—33*
Eastern	+1·2	*+6*	—0·6	*—4*	—0·2	*—7*	*—1·4*	*—18*
London and South Eastern ..	+0·5	*+3*	—0·6	*—4*	—0·5	*—20*	—2·3	*—29*
Southern	+1·6	*+8*	+0·2	*+2*	—0·8	*—24*	—0·9	*—11*
South Western	+0·5	*+2*	—1·7	*—11*	—0·5	*—17*	—0·7	*—9*
Wales I	+1·4	*+5*	+0·9	*+5*	—0·2	*—4*	—2·9	*—21*
Wales II	—3·2	*—12*	—2·1	*—12*	—0·2	*—5*	—6·2	*—45*
England and Wales	+0·9	*+4*	—0·3	*—2*	—0·5	*—15*	—3·4	*—31*

The perinatal mortality rate in Wales I was 41 per cent above that of the London and South Eastern region, and rates in the three northern regions were also high compared with the rest of England and Wales (see Diagram 3 page 72).

Diagram 3



Perinatal mortality rates per 1,000 total births in standard regions of England and Wales: 1954

The standard regions of England and Wales are as follows:—

R.I. =Northern
R.II. =East and West Ridings
R.III.=North Midland
R.IV.=Eastern
R.V. =London and South Eastern
R.VI.=Southern
R.VII. =South Western
R.VIII. =Wales
(*W.I.* =*South East*)
(*W.II.* =*Remainder*)
R.IX. =Midland
R.X. =North Western

Total infant mortality in the conurbations of Tyneside, West Yorkshire and Merseyside was in each case a little in excess of that of the rest of the region, but stillbirth rates were lower in each conurbation except South East Lancashire than in the remainder of the corresponding region.

The infant mortality rates from the most important causes of death were for the most part unfavourable to Wales and the North of England (see Table XLII, page 90). Mortality due to congenital malformations was 43 and 28 per cent higher in these two areas than in the South of England. Among causes to which children were subject in the postnatal period, gastroenteritis (including diarrhœa of the newborn) was second in importance only to pneumonia and bronchitis. The infant death rates from the latter ranged from 5·15 per 1,000 related live births in the North of England to 2·97 in the South. Wales, with so many adverse rates, had nevertheless the lowest death rate of the four regional groups from neglect and lack of care of the newborn. Erythroblastosis, a condition associated with rhesus factor incompatibility, mortality from which is regarded as largely preventable, caused a higher death rate in the South of England in 1950 than elsewhere. Since then the rates in this part of the country have decreased, whereas in the remaining three divisions they were higher in 1954 than in 1950 or 1952, as the following table shows:—

Year	Infant mortality rates from erythroblastosis per 1,000 related live births				
	England and Wales	North of England	Midland and Eastern Regions	South of England	Wales
1950 ..	0·7	0·6	0·6	0·9	0·7
1952 ..	0·7	0·6	0·7	0·7	0·8
1954 ..	0·7	0·8	0·8	0·5	0·8

The stillbirth rate and various rates measuring infant mortality are shown in Table XLI (page 88) for the conurbations, for various aggregates of urban areas with populations lying within certain limits of size and for rural districts. The aggregate of rural districts had lower stillbirth and early neonatal death rates than the other groups of areas, and the late neonatal and post-neonatal mortality rates were lowest for the conurbations combined.

	Perinatal mortality	Stillbirth rate	Early neo-natal mortality	Late neo-natal mortality	Post-neo-natal mortality
England and Wales	**38·05**	**23·48**	**14·91**	**2·82**	**7·69**
Conurbations	37·03	22·91	14·45	2·56	7·18
Other urban areas—					
with populations of 100,000 and over	39·64	24·50	15·51	2·77	8·68
with populations of 50,000 and under 100,000	39·64	24·45	15·57	3·11	7·84
with populations under 50,000 ..	39·61	24·16	15·82	3·08	8·13
Rural districts	36·59	22·77	14·14	2·93	7·47

Among urban aggregates mortality rates at age 1 week and over per 1,000 total births were lowest in the medium sized districts with population between 50,000 and 100,000. Only the most general comparisons can be made between urban aggregates in the four divisions of the country shown in the Table, as

they cover very varying types of urban district. Thus in Wales there is only one urban area in the medium sized group, Merthyr Tydfil (population 59,700), and the areas with population under 50,000 vary from Llanwrtyd (530) to Pontypool (42,030) and Port Talbot (45,850).

That the stillbirth rate is one of the chief problems of infant wastage is once more brought home by Table XLIV (page 93), which shows the regional variation in rates during 1950 to 1954. The rates in 1954 as percentages of those in 1950 were as follows:—

	Stillbirth rate	Neonatal death rate	Post-neonatal death rate
England and Wales	**104**	**96**	**69**
North of England	106	97	63
Northern	96	98	54
East and West Ridings	109	93	73
North Western	110	100	63
Midlands and Eastern Regions	104	97	70
North Midland	105	95	68
Midland	103	100	67
Eastern	106	95	82
South of England	103	93	78
London and South Eastern	103	93	71
Southern	108	97	89
South Western	102	88	91
Wales (including Monmouthshire) ..	100	100	72

Only in the Northern region have the stillbirth rates in 1951 to 1954 been consistently less than the 1950 rate. Until more is known of the causes of stillbirth, there seems little hope of preventing this wastage of potentially valuable lives.

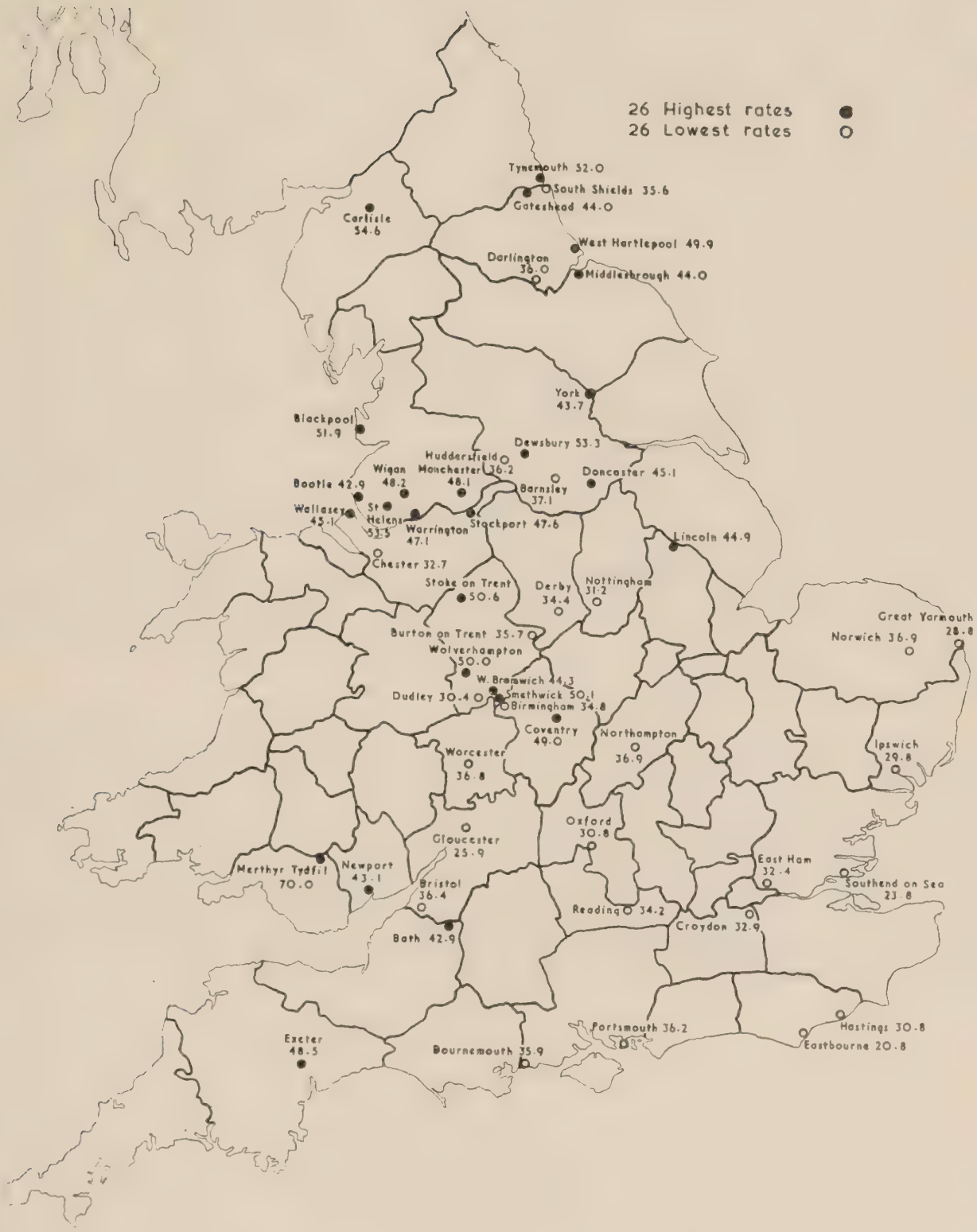
Wide variations in perinatal and post-perinatal mortality were found among county boroughs. Thus Merthyr Tydfil had a perinatal mortality rate of 70·0, which was 3·4 times that of Eastbourne, 20·8. The highest post-perinatal mortality rate, that of West Hartlepool, 23·1, was nearly 6 times greater than the lowest, 3·9, in East Ham.

Diagram 4 (page 75) shows the variations which can exist in places situated near together and where much the same conditions might be expected to prevail.

Immaturity

According to the International Statistical Classification, an immature baby is one which weighs at birth 5½ lbs or less or is specified as immature on the death certificate. In the event of the birth weight not being stated, any evidence of immaturity on the death certificate may be taken into account, such as mention of a gestation period of 37 weeks or less, or prematurity, or of a multiple birth. Section XV of the Classification, " Certain Diseases of Early Infancy ", can be cross-classified according to whether immaturity was or was not mentioned on the death certificate.

Diagram 4



Perinatal mortality rates per 1,000 total births for selected County Boroughs of England and Wales: 1954

Cause of death	Infant mortality rate	Early neo-natal mortality rate	Late neo-natal mortality rate	Post-neo-natal mortality rate
All causes	**25·42**	**14·91**	**2·82**	**7·69**
Immaturity or with mention of immaturity:—	9·09	8·35	0·66	0·08
(*a*) alone, or primary to diseases other than those of early infancy (774, 776)	4·76	4·43	0·27	0·06
(*b*) associated with diseases of early infancy (760.5–773.5)	4·32	3·92	0·39	0·01
Percentage of total rate, in which immaturity was mentioned ..	*36*	*56*	*23*	*1*

In 36 per cent of all infant deaths under one year, immaturity was either the sole cause of death or primary to some other cause or associated with one of the "diseases of early infancy". There were in addition a number of death certificates in which immaturity or an equivalent term was mentioned as a contributory cause to diseases other than those in Section XV of the Classification. Immaturity was a commoner cause of infant deaths during the first and fourth quarters of 1954 than during the period April to September (see Table XXXVIII, page 84). Whereas the England and Wales rate was 9·09, in Wales it was 10·51 and in the North of England 10·02, excesses of 16 and 10 per cent respectively above the national figures. In the South of England the rate was 7·98, 12 per cent below the average.

In order to see to what extent immaturity was mentioned as a cause associated with diseases other than those of early infancy, an examination was made of the certificates of infant deaths during 1954, and 330 such cases were found, 165 boys and 165 girls. As had been foreseen (see Text Volume, 1952, page 92), the majority of deaths, 127 boys and 113 girls were due to congenital malformations. Of the total of 3,166 deaths due to this cause, about 8 per cent showed immaturity as an associated cause. The various periods elapsing before death and an analysis of the types of malformation certified in relation to the period before death, are shown in the two following tables:—

Number of deaths with mention of immaturity, associated with diseases other than those of early infancy, England and Wales, 1954

Cause of death		Under 30 mins.	30 mins. and under 1 hr.	1 hr. and under 6 hrs.	6 hrs. and under 12 hrs.	12 hrs. and under 18 hrs.	18 hrs. and under 1 day	1 day	2 days	3 days	4 days	5 days	6 days	1 week	2 weeks	3 weeks	4 wks.- 2 mths.	3–5 mths.	6–8 mths.	9–11 mths.	Total under 1 year
Congenital malformations (750—759)	M	6	10	18	5	6	1	12	14	7	7	2	5	7	7	4	15	—	1	—	127
	F	6	8	15	8	4	—	9	11	11	6	3	2	12	5	1	9	3	—	—	113
Pneumonia* (490—493)	M	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	3	2	—	13
	F	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9	2	1	—	12
Bronchitis (500—502)	M	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	3
	F	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	2	—	1	6
Meningitis (340)	M	—	—	—	—	—	—	—	—	—	—	—	—	4	—	—	1	—	—	—	5
	F	—	—	—	—	—	—	—	—	—	—	—	—	2	3	—	—	—	—	—	5
Gastro-enteritis (571)	M	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—	—	—	4
	F	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	1	—	—	7
Others	M	—	—	—	—	1	—	1	2	—	—	—	—	1	1	—	6	1	—	—	13
	F	—	—	2	—	1	—	1	1	1	—	—	—	1	1	2	8	3	1	—	22
Total	M	**6**	**10**	**18**	**5**	**7**	**1**	**13**	**16**	**7**	**7**	**2**	**5**	**12**	**8**	**4**	**37**	**4**	**3**	—	**165**
	F	**6**	**8**	**17**	**8**	**5**	—	**10**	**12**	**12**	**6**	**3**	**2**	**15**	**9**	**3**	**35**	**11**	**2**	**1**	**165**

* Excluding "Pneumonia of the newborn", i.e. under 4 weeks.

Deaths from Congenital malformations with mention of immaturity as an associated cause, by sex at ages under 1 year, England and Wales, 1954.

I.S.C. No.	Type of malformation or defect		Under 30 mins.	30 mins. and under 1 hr.	1 hr. and under 6 hrs.	6 hrs. and under 1 day	1 day	2 days	3 days	4 days	5 or 6 days	1 week	2 weeks	3 weeks	4 wks.-2 mths.	3 mths. and under 1 year	Total under 1 year
750	Monstrosity	M	1	1	—	1	1	—	—	—	—	—	—	—	—	—	4
		F	3	2	4	—	—	1	—	—	—	—	—	—	—	—	10
751	Spina bifida and meningocele*	M	—	1	2	1	2	—	—	—	—	—	1	—	—	—	7
		F	1	—	2	3	2	3	2	1	—	2	1	—	—	1	18
752	Hydrocephalus	M	1	—	2	1	1	—	1	2	—	—	—	—	5	—	13
		F	—	1	2	—	—	1	—	—	—	—	—	—	—	—	4
753	Other malformations of nervous system	M	1	—	—	—	—	—	1	—	1	—	—	—	—	1	4
		F	—	—	—	1	—	—	1	—	—	1	—	—	—	—	3
754. 0–. 3	Septal defects and patent ductus arteriosus	M	—	—	1	—	—	1	—	—	1	—	1	1	1	—	6
		F	—	—	—	—	2	2	—	1	—	—	—	—	3	—	8
754. 4	Other and unspecified malformation of heart	M	—	—	1	1	3	5	1	1	—	—	1	—	—	—	13
		F	—	—	1	3	1	1	1	1	—	4	—	—	4	2	18
754. 5–. 6	Coarctation of aorta and other circulatory malformations	M	—	—	1	2	1	1	—	—	—	1	—	—	—	—	6
		F	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
755	Cleft palate and hare lip	M	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		F	—	—	—	—	—	1	—	—	—	—	—	—	1	—	2
756	Congenital malformations of digestive system	M	1	—	—	2	—	3	3	2	5	5	3	2	7	—	32
		F	—	—	—	—	1	2	4	2	4	3	2	1	—	—	18
757	Congenital malformations of genito-urinary system	M	—	2	2	2	1	—	—	—	—	—	—	—	1	—	8
		F	—	1	2	—	—	—	—	—	—	—	—	—	—	—	3
758	Congenital malformations of bone and joint	M	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		F	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1
	Multiple congenital malformations†	M	1	5	7	1	2	4	—	1	—	—	1	1	—	—	23
		F	1	2	3	3	1	1	2	—	1	—	1	—	1	—	16
560, 561	Congenital hernias	M	—	1	1	1	—	—	1	—	—	1	—	—	1	—	6
		F	1	—	—	1	1	—	1	1	—	—	—	—	—	—	5
	Other malformations present at birth	M	1	—	1	—	1	1	—	1	—	—	—	—	—	—	5
		F	—	1	1	—	1	—	—	—	—	2	1	—	—	—	6
	Total	M	**6**	**10**	**18**	**12**	**12**	**14**	**7**	**7**	**7**	**7**	**7**	**4**	**15**	**1**	**127**
		F	**6**	**8**	**15**	**12**	**9**	**11**	**11**	**6**	**5**	**12**	**5**	**1**	**9**	**3**	**113**

* Including 2 males and 3 females with spina bifida and hydrocephalus.

† Excluding those with both spina bifida and hydrocephalus.

Live Births, Stillbirths and Stillbirth Rates by Age and Parity* of Mother and Place of Confinement

In 1954, out of a total of 689,851 live and stillbirths in England and Wales, 408,205 (59 per cent) took place in National Health Service Hospitals (except mental hospitals), 30,817 (5 per cent) took place in other hospitals (mainly private maternity homes), 234,438 (34 per cent) took place at home, and 16,391 (2 per cent) took place in " other " places. This last category includes homes for unmarried mothers, remand homes, reception centres, etc.

Table XLVI (page 104) gives the number of live births, and Table XLVII (page 105) the number of stillbirths, by age and parity of mother according to the place of confinement. Table XLIX (page 107) gives the percentage distribution of births for each place of confinement within each age/parity group. In these tables all illegitimate births have been included as first-born children, since there is no information which differentiates the minority of illegitimate births which occur to women who have previously borne children.

About 80 per cent of mothers whatever their age have their first children in hospitals or maternity homes. This percentage falls off for each subsequent child up to the fourth and the percentage of children born at home increases. Multiparous women, however, are more likely to have their babies in hospital if they are above 35 years of age. The percentage of children born in " other " places falls off with increasing age of mother. The percentage distribution by parity and place of confinement for those mothers whose age is not stated is at variance with these general findings. The high stillbirth rate, particularly for " other " places of confinement, shown in Table XLVIII (page 106) suggests that this group is of abnormal constitution.

Table XLVIII shows the stillbirth rates by age and parity of mother according to place of confinement. Rates based on less than 20 stillbirths are shown in italics. In general the stillbirth rate rises with age for mothers above 25. Stillbirth rates are higher for first than for second births, but for third and subsequent births the rate rises again. This is partly due to the increasing age of the mother, but the pattern is also found within each individual age-group.

The stillbirth rate is higher in National Health Service Hospitals than elsewhere. This is to be expected, since no doubt they take a high proportion of the cases where difficulties are anticipated. Although it is difficult to generalise, it would appear that the stillbirth rate is slightly less for births in non-N.H.S. Hospitals than at home. This may well be due to medical need being a less decisive factor in securing admission to these institutions than it is in securing admission to N.H.S. Hospitals.

A set of tables is available for reference at the General Register Office showing numbers of live and stillbirths, with a breakdown as in Tables XLVI and XLVII, for individual county boroughs and administrative counties within England and Wales. A copy of these tables, or of a table for a particular area, can also be obtained from the General Register Office on payment.

* "Parity" in this instance means the number of previous liveborn children.

Table XXXVI.—Principal Causes of Death Under One Year, arranged in ætiological groups: (*a*) Age-group distribution per cent of all deaths assigned to each cause; (*b*) Cause distribution per 1,000 total deaths in each age-group. England and Wales, 1954

Ætiological Group	Cause of Death (and International Classification numbers)	Number of infant deaths (under 1 year)	Age distribution per cent of total infant deaths assigned to each cause					Cause distribution per 1,000 total infant deaths in each age-group				
			Infant mortality (under 1 year)	Neonatal mortality			Post-neonatal mortality (4 weeks and under 1 year)	Infant mortality (under 1 year)	Neonatal mortality			Post neonatal mortality (4 weeks and under 1 year)
				Under 4 weeks	Early (under 1 week)	Late (1 week and under 4 weeks)			Under 4 weeks	Early (under 1 week)	Late (1 week and under 4 weeks)	
ALL CAUSES	**All causes**	**17,160**	**100**	**70**	**59**	**11**	**30**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**
	Congenital malformations (750–759) ..	3,166	100	65	42	23	35	185	172	131	386	215
	Total causes mainly of prenatal and natal origin other than congenital malformations	8,599	100	99	93	6	1	501	710	793	270	22
Prenatal and Natal Group (including congenital malformations)	Immaturity alone, or primary to diseases other than of early infancy (774, 776)	3,208	100	99	93	6	1	188	265	297	98	7
	Attributed to maternal toxæmia (769)	128	100	100	99	1	—	7	11	13	*1*	—
	Ill-defined diseases of early infancy (773)	231	100	92	80	12	8	13	18	18	14	*4*
	Postnatal asphyxia and atelectasis (762)	2,494	100	99	95	4	1	145	206	234	57	6
	Intracranial and spinal injury at birth (760)	1,498	100	99	92	7	1	87	124	137	53	*3*
	Other birth injury (including maternal antepartum hæmorrhage) (761) ..	359	100	100	97	3	—	21	30	35	*5*	—
	Erythroblastosis (770)	461	100	97	86	11	3	27	38	40	26	*2*
	Hæmorrhagic disease of newborn (771)	220	100	99	85	14	1	13	18	19	16	*0*

	Total causes mainly of postnatal origin	4,467	100	24	12	12	76	260	91	52	299	647
Postnatal Group	Gastro-enteritis (including diarrhœa of newborn) (571, 764)	461	100	9	0	9	91	27	3	*0*	20	81
	Pneumonia and bronchitis (490-493, 763 : 500-502)	2,725	100	29	15	14	71	158	65	39	206	371
	Clauses classified as infective (001-138): others mainly infective in origin*	697	100	19	4	15	81	41	11	3	55	108
	Whooping cough; measles (056, 085)	109	100	2	—	2	98	6	*0*	—	*1*	20
	Acute upper respiratory infections and influenza (470-475; 480-483)	58	100	12	—	12	88	3	*1*	—	*4*	10
	Otitis media and mastoiditis; empyema; pleurisy (391-393; 518, 519)	88	100	11	—	11	89	5	*1*	—	*5*	15
	Septicæmia; skin and subcutaneous tissue infections; sepsis of newborn (053, 690-698, 765-768) ..	119	100	57	14	43	43	7	5	*2*	27	10
	Tuberculosis other than tuberculous meningitis (001-008 ; 011-019) ..	26	100	8	4	4	92	2	*0*	*0*	*1*	5
	Tuberculous meningitis (010) ..	10	100	—	—	—	100	*1*	—	—	—	*2*
	Meningococcal infections and non-meningococcal meningitis (057 ; 340)	224	100	17	4	13	83	13	3	*1*	14	35
	Causes classified as infective not specified above (remainder 001-138)	63	100	13	3	10	87	4	*1*	*0*	*3*	11
	Accidental mechanical suffocation from vomit, food, foreign body, or in cot (E921-E925)	438	100	10	4	6	90	26	4	*2*	14	76
	Lack of care ; neglect (including foundlings); infanticide (E926; E980-E985)	91	100	77	75	2	23	5	6	7	*1*	4
	Other accidental causes (remainder E800-E999)	55	100	38	27	11	62	3	2	*1*	*3*	7
	Total causes remaining	928	100	35	26	9	65	54	27	24	45	116
Unclassified	Neoplasms (140-239)	84	100	29	24	5	71	5	2	*2*	*2*	12
	Other remaining causes	844	100	35	25	10	65	49	25	22	43	104

* 340, 391-393, 470-483, 518, 519, 690-698, 765-768.

Table XXXVII.—Principal Causes of Death Under One Year and in the Neonatal, Post-neonatal and other Age Periods, by Sex, per 1,000 related live births. England and Wales, 1954

Ætiological Group	Cause of death (and International Classification numbers)		Total Infant mortality (under 1 year)	Infant Mortality per 1,000 related live births at various ages								
				Neonatal mortality (under 4 weeks)	Early neonatal mortality (under 1 week)	Late neonatal mortality (1 week and under 4 weeks)	Post-neonatal mortality (4 weeks and under 1 year)	Early neonatal period		Post-neonatal period		
								Under 1 day	1 day and under 1 week	4 weeks and under 3 months	3 months and under 6 months	6 months and under 1 year
ALL CAUSES	**All Causes**	M.	**28·68**	**20·17**	**17·08**	**3·09**	**8·51**	**8·32**	**8·76**	**3·32**	**2·90**	**2·29**
		F.	**21·97**	**15·14**	**12·61**	**2·53**	**6·83**	**6·77**	**5·85**	**2·68**	**2·28**	**1·87**
	Congenital malformations (750-759) ..	M.	4·74	3·07	1·98	1·09	1·67	0·71	1·27	0·82	0·45	0·40
		F.	4·64	3·02	1·93	1·09	1·62	0·87	1·06	0·74	0·47	0·40
	Total causes mainly of prenatal and natal origin other than congenital malformations	M.	14·89	14·69	13·79	0·90	0·20	7·30	6·49	0·15	*0·03*	*0·03*
		F.	10·51	10·36	9·74	0·62	0·15	5·56	4·18	0·11	*0·03*	*0·01*
Prenatal and Natal Group (including congenital malformations)	Immaturity alone or primary to diseases other than of early infancy (774-776)	M.	5·36	5·29	5·00	0·29	0·07	3·09	1·91	0·07	—	—
		F.	4·13	4·08	3·82	0·26	*0·05*	2·25	1·57	*0·05*	*0·00*	—
	Attributed to maternal toxæmia (769) ..	M.	0·21	0·21	0·20	*0·01*	—	0·10	0·10	—	—	—
		F.	0·17	0·17	0·17	—	—	0·08	0·09	—	—	—
	Ill-defined diseases of early infancy (773)	M.	0·34	0·32	0·28	*0·04*	*0·02*	0·14	0·14	*0·02*	—	*0·00*
		F.	0·34	0·31	0·27	*0·04*	*0·03*	0·15	0·13	*0·02*	*0·01*	—
	Postnatal asphyxia and atelectasis (762)	M.	4·44	4·39	4·19	0·20	*0·05*	2·10	2·10	*0·03*	*0·02*	*0·00*
		F.	2·92	2·88	2·76	0·12	*0·04*	1·60	1·15	*0·02*	*0·01*	*0·01*
	Intracranial and spinal injury at birth (760)	M.	2·74	2·72	2·50	0·22	*0·02*	1·13	1·37	*0·01*	*0·01*	*0·01*
		F.	1·67	1·65	1·57	0·08	*0·02*	0·81	0·76	*0·02*	—	*0·01*
	Other birth injury (including maternal antepartum hæmorrhage) (761) ..	M.	0·62	0·62	0·60	*0·02*	—	0·42	0·19	—	—	—
		F.	0·44	0·44	0·43	*0·01*	—	0·31	0·12	—	—	—
	Erythroblastosis (770)	M.	0·80	0·78	0·68	0·10	*0·02*	0·28	0·40	*0·01*	*0·00*	*0·01*
		F.	0·56	0·55	0·50	*0·05*	*0·01*	0·34	0·17	*0·01*	*0·00*	—
	Hæmorrhagic disease of newborn (771)	M.	0·38	0·38	0·33	*0·05*	*0·00*	0·06	0·27	*0·01*	—	—
		F.	0·27	0·27	0·22	*0·05*	—	*0·04*	0·19	—	—	—

	Total causes mainly of postnatal origin ..	M.	7·49	1·88	0·95	0·93	5·61	0·18	0·76	2·02	2·08	1·52
		F.	5·65	1·35	0·61	0·74	4·30	0·17	0·44	1·59	1·56	1·14
Postnatal Group	Gastro-enteritis (including diarrhœa of newborn) (571, 764)	M.	0·76	0·06	*0·00*	0·06	0·70	—	*0·00*	0·25	0·23	0·22
		F.	0·59	*0·06*	*0·00*	*0·06*	0·53	—	*0·00*	0·18	0·22	0·14
	Pneumonia and bronchitis (490-493, 763: 500-502)	M.	4·57	1·41	0·75	0·66	3·16	0·08	0·67	1·17	1·19	0·80
		F.	3·45	0·90	0·41	0·49	2·55	*0·05*	0·36	1·00	0·93	0·62
	Causes classified as infective (001-138): others mainly infective in origin* ..	M.	1·54	0·20	*0·05*	0·15	1·34	*0·00*	*0·05*	0·33	0·28	0·34
		F.	0·89	0·20	*0·03*	0·17	0·69	*0·00*	*0·03*	0·22	0·19	0·29
	Accidental mechanical suffocation from vomit, food, foreign body, or in cot (E921-E925)	M.	0·76	0·07	*0·03*	*0·04*	0·69	*0·01*	*0·02*	0·25	0·33	0·11
		F.	0·53	*0·06*	*0·02*	*0·04*	0·47	*0·00*	*0·02*	0·18	0·20	0·08
	Lack of care; neglect (including foundlings; infanticide (E926, E980-E985)	M.	0·13	0·10	0·09	*0·01*	*0·03*	0·09	—	*0·01*	*0·02*	*0·01*
		F.	0·13	0·11	0·11	—	*0·02*	0·10	*0·01*	*0·01*	*0·01*	*0·01*
	Other accidental causes (remainder E800-E999)	M.	0·10	*0·03*	*0·02*	*0·01*	0·07	*0·01*	*0·02*	*0·01*	*0·02*	*0·04*
		F.	0·05	*0·03*	*0·02*	*0·01*	*0·02*	*0·01*	*0·02*	—	*0·02*	*0·01*
UNCLASSIFIED	Total causes remaining	M.	1·55	0·54	0·37	0·17	1·01	0·13	0·24	0·33	0·34	0·34
		F.	1·18	0·42	0·33	0·09	0·76	0·17	0·17	0·24	0·21	0·31
Immaturity, or with mention of immaturity (774, 776; 760.5-773.5)			9·09	9·01	8·35	0·66	0·08	4·58	3·77	0·07	*0·00*	—
Immaturity alone, or primary to disease other than of early infancy (774, 776)			4·76	4·70	4·43	0·27	0·06	2·68	1·75	0·06	*0·00*	—
Immaturity associated with diseases of early infancy (760.5-773.5)			4·32	4·31	3·92	0·39	*0·01*	1·90	2·02	*0·02*	*0·00*	—
All other causes (760.0-773.0 and remainder)			16·33	8·72	6·57	2·15	7·61	2·99	3·58	2·93	2·59	2·09

* 340, 391-393, 470-483, 518, 519, 690-698, 765-768.

Table XXXVIII.—Stillbirths per 1,000 Total Births, Infant Deaths and Deaths in the Early Neonatal, Late Neonatal and Post-neonatal Periods per 1,000 Related Live Births, and Death Rates from the Principal Causes of Infant Mortality; Comparison of Annual and Quarterly Rates. England and Wales, 1954

Ætiological Group	Cause of Death (and International Classification numbers)	Annual Rates (per 1,000 related live births)	Quarterly Rates (Per 1,000 live birth occurrences)*				Quarterly Rates per cent of Annual Rates			
			Jan. to March	April to June	July to Sept.	Oct. to Dec.	Jan. to March	April to June	July to Sept.	Oct. to Dec.
Stillbirths (late fœtal deaths at or over 28 weeks gestation)		23·48	23·96	22·89	23·55	24·12	102	97	100	103
Early Neonatal Deaths (infant deaths at ages under 1 week)		14·91	15·80	14·69	13·95	15·22	106	99	94	102
Late Neonatal Deaths (infant deaths at ages 1 week and under 4 weeks)		2·82	3·61	2·88	2·21	2·53	128	102	78	90
Post-neonatal Deaths (infant deaths at ages 4 weeks and under 1 year)		7·69	11·02	6·80	5·14	7·94	143	88	67	103
Infant deaths (total under 1 year)		25·42	30·43	24·37	21·29	25·70	120	96	84	101
	Congenital malformations (750-759)	4·69	4·81	4·65	4·40	4·95	103	99	94	106
	Total causes mainly of prenatal and natal origin other than congenital malformations	12·76	13·84	12·38	11·69	13·15	108	97	92	103
Prenatal and Natal Group (including congenital malformations)	Immaturity alone, or primary to diseases other than of early infancy (774, 776)	4·76	5·34	4·62	4·07	5·02	112	97	86	105
	Attributed to maternal toxæmia (769)	0·19	0·15	0·21	0·19	0·21	79	111	100	111
	Ill-defined diseases of early infancy (773)	0·34	0·52	0·26	0·29	0·30	153	76	85	88
	Postnatal asphyxia and atelectasis (762)	3·70	3·80	3·77	3·46	3·77	103	102	94	102
	Intracranial and spinal injury at birth (760)	2·22	2·42	2·08	2·05	2·36	109	94	92	106
	Other birth injury (including maternal antepartum hæmorrhage) (761)	0·53	0·58	0·43	0·57	0·55	109	81	108	104
	Erythroblastosis (770)	0·68	0·64	0·72	0·76	0·60	94	106	112	88
	Hæmorrhagic disease of newborn (771)	0·33	0·38	0·28	0·29	0·35	115	85	88	106

	Total causes mainly of postnatal origin	6·60	10·16	5·77	4·04	6·47	154	87	61	98
Postnatal Group	Gastro-enteritis (including diarrhœa of newborn) (571,764)	0·68	1·08	0·71	0·38	0·54	159	104	56	79
	Pneumonia and bronchitis (490-493, 763 : 500-502).. ..	4·03	6·71	3·12	2·20	4·12	167	77	55	102
	Causes classified as infective (001-138): others mainly infective in origin (340; 391-393; 470-483; 518, 519; 690-698; 765-768)	1·03	1·35	1·04	0·76	0·96	131	101	74	93
	Accidental mechanical suffocation from vomit, food, foreign body, or in cot (E921-E925)	0·64	0·78	0·63	0·50	0·69	122	98	78	108
	Lack of care ; neglect (including foundlings) ; infanticide (E926 ; E980-E985)	0·13	0·16	0·14	0·14	*0·10*	123	108	108	77
	Other accidental causes (remainder E800-E999)	0·08	*0·08*	0·13	*0·05*	*0·06*	100	163	63	75
UNCLASSIFIED	Total causes remaining	1·37	1·62	1·57	1·15	1·13	118	115	84	82
Immaturity, or with mention of immaturity (774 ; 776 ; 760·5-773·5)		9·09	9·92	8·73	8·29	9·42	109	96	91	104
Immaturity alone, or primary to diseases other than of early infancy (774, 776)		4·76	5·34	4·62	4·07	5·02	112	97	86	105
Immaturity associated with diseases of early infancy (760·5-773·5)		4·32	4·59	4·11	4·22	4·40	106	95	98	102
All other causes (760·0-773·0 and remainder)		16·33	20·51	15·64	13·00	16·28	126	96	80	100

* Stillbirth rates are per 1,000 total births. Infant mortality rates from all causes are per 1,000 related live births.

Table XXXIX.—Infant Mortality per 1,000 Related Live Births, and combined Stillbirth and Infant Death Rates per 1,000 Total Births, according to Age. England and Wales, Standard Regions and Conurbations, 1954

Standard Regions and Conurbations within the standard regions	Total infant mortality (under 1 year)	Infant mortality per 1,000 related live births at various ages									Stillbirths and infant deaths. Rates per 1,000 total births				
		Neonatal mortality (under 4 weeks)	Early neonatal mortality (under 1 week)	Late neonatal mortality (1 week and under 4 weeks)	Post-neonatal mortality (4 weeks and under 1 year)	Early neonatal period		Post-neonatal period			Stillbirths plus infant deaths under 1 year	Stillbirths (late fœtal deaths at or over 28 weeks gestation)	Stillbirths plus infant deaths under 1 week	Infant deaths at 1 week and over	Stillbirths plus infant deaths under 4 weeks
						Under 1 day	1 day and under 1 week	4 weeks and under 3 months	3 months and under 6 months	6 months and under 1 year					
ENGLAND AND WALES	**25·42**	**17·73**	**14·91**	**2·82**	**7·69**	**7·57**	**7·35**	**3·01**	**2·59**	**2·09**	**48·36**	**23·48**	**38·05**	**10·31**	**40·80**
Standard Regions:															
NORTH OF ENGLAND															
Northern	29·61	20·39	16·92	3·47	9·22	8·48	8·44	3·21	3·34	2·67	53·77	24·83	41·34	12·43	44·72
East and West Ridings	27·78	18·12	15·42	2·70	9·66	8·04	7·38	4·17	3·05	2·44	52·11	24·97	40·00	12·11	42·64
North Western	29·17	20·19	17·03	3·16	8·98	8·64	8·39	3·86	2·89	2·23	55·28	26·84	43·41	11·87	46·49
MIDLANDS AND EASTERN															
North Midland	25·99	17·96	14·83	3·13	8·03	7·16	7·68	2·95	2·90	2·18	49·53	24·11	38·59	10·94	41·64
Midland	27·31	19·44	16·32	3·12	7·87	8·42	7·90	2·89	2·60	2·38	51·07	24·37	40·29	10·78	43·34
Eastern	21·66	15·50	12·90	2·60	6·16	6·38	6·52	2·29	2·12	1·75	43·05	21·81	34·43	8·62	36·98
SOUTH OF ENGLAND															
London and South Eastern	20·29	14·77	12·75	2·02	5·52	6·83	5·92	2·04	2·00	1·48	39·98	20·06	32·56	7·42	34·53
Southern	23·19	16·16	13·52	2·64	7·03	6·51	7·00	2·60	2·10	2·33	43·30	20·54	33·78	9·52	36·37
South Western	23·54	16·30	13·81	2·49	7·24	7·47	6·34	2·69	2·50	2·05	46·05	23·00	36·50	9·55	38·93
WALES (including Monmouthshire)															
Wales I (South East)	*33·22*	*22·25*	*17·95*	*4·30*	*10·97*	*8·18*	*9·78*	*4·63*	*3·93*	*2·41*	*60·90*	*28·57*	*46·01*	*14·90*	*50·18*
Wales II (Remainder)	*26·91*	*19·43*	*15·58*	*3·85*	*7·48*	*5·68*	*9·90*	*4·12*	*1·46*	*1·90*	*50·29*	*23·98*	*39·19*	*11·10*	*42·95*
Conurbations within Standard Regions:															
Tyneside conurbation	29·70	20·73	16·89	3·84	8·97	7·59	9·30	3·90	3·13	1·94	53·52	24·49	40·97	12·55	44·71
Rest of Northern region	*29·57*	*20·27*	*16·93*	*3·34*	*9·30*	*8·81*	*8·12*	*2·95*	*3·42*	*2·93*	*53·86*	*24·96*	*41·47*	*12·39*	*44·73*
West Yorkshire conurbation	28·23	18·31	15·73	2·58	9·92	8·89	6·84	4·18	3·32	2·42	52·17	24·58	39·92	12·25	42·44
Rest of East and West Ridings region	*27·49*	*18·00*	*15·22*	*2·78*	*9·49*	*7·48*	*7·74*	*4·16*	*2·87*	*2·46*	*52.08*	*25·22*	*40·06*	*12·02*	*42·77*
S.E. Lancashire conurbation	28·62	19·54	16·68	2·86	9·08	8·59	8·09	4·00	2·89	2·19	55·81	27·93	44·15	11·66	46·92
Merseyside conurbation	29·77	20·26	16·95	3·68	9·14	9·14	7·81	4·26	3·33	1·92	54·75	25·68	42·20	12·55	45·43
Rest of North Western region ..	*29·28*	*20·78*	*17·42*	*3·36*	*8·50*	*8·34*	*9·08*	*3·44*	*2·57*	*2·49*	*55·14*	*26·59*	*43·55*	*11·59*	*46·82*
West Midlands conurbation	25·64	17·90	14·54	3·36	7·74	7·73	6·81	2·88	2·73	2·13	48·34	23·24	37·45	10·89	40·73
Rest of Midland region	*29·01*	*21·00*	*18·12*	*2·88*	*8·01*	*9·12*	*9·00*	*2·90*	*2·47*	*2·64*	*53·85*	*25·52*	*43·18*	*10·66*	*45·99*
Greater London conurbation	19·55	14·48	12·58	1·90	5·07	6·94	5·64	1·89	1·88	1·30	39·23	20·04	32·37	6·86	34·23
Rest of South Eastern region ..	*22·61*	*15·69*	*13·28*	*2·41*	*6·92*	*6·51*	*6·78*	*2·52*	*2·37*	*2·03*	*42·32*	*20·11*	*33·13*	*9·19*	*35·49*

Table XL.—Secular Trend of Stillbirths per 1,000 total births, 1931-54, and of Deaths in the Neonatal, Post-neonatal and other Age Periods under One Year per 1,000 live births, 1906-1954. England and Wales

Quinquennium and year	Total infant mortality (under 1 year)	Infant mortality per 1,000 live births, * at various ages									Stillbirths and infant deaths—Rates per 1,000 total births†				
		Neonatal mortality (under 4 weeks)	Early neonatal mortality (under 1 week)	Late neonatal mortality (1 week and under 4 weeks)	Post-neonatal mortality (4 weeks and under 1 year)	Early neonatal period		Post-neonatal period			Stillbirths plus infant deaths under 1 year	Stillbirths (*late fœtal deaths, at or over 28 weeks gestation*)	Stillbirths plus infant deaths under 1 week—"*Perinatal Mortality*"	Infant deaths at 1 week and over	Stillbirths plus infant deaths under 4 weeks
						Under 1 day	1 day and under 1 week	4 weeks and under 3 months	3 months and under 6 months	6 months and under 1 year					
1906–1910	117·1	40·2	24·5	15·7	76·9	11·5	13·0	22·8	22·8	32·1	—	—	—	—	—
1911–1915	108·7	39·0	24·1	14·9	69·8	11·4	12·7	20·2	19·6	30·0	—	—	—	—	—
1916–1920	90·9	37·0	23·4	13·7	53·9	11·0	12·4	16·5	14·6	22·8	—	—	—	—	—
1921–1925	74·9	33·4	21·7	11·7	41·6	10·4	11·3	12·8	11·3	17·5	—	—	—	—	—
1926–1930	67·6	31·8	21·8	9·9	35·7	10·3	11·5	10·8	9·5	15·4	—	—	—	—	—
1931–1935	61·9	31·4	22·4	9·0	30·5	10·7	11·7	9·9	8·5	12·1	—	—	—	—	—
1936–1940	55 3	29·2	21·5	7·7	26·0	10·4	11·2	8·8	7·8	9·4	—	—	—	—	—
1941–1945	49·8	26·0	18·7	7·2	23·8	9·3	9·5	8·9	7·7	7·2	—	—	—	—	—
1946–1950	36·3	21·1	16·2	4·9	15·2	7·9	8·4	5·8	5·0	4·4	—	—	—	—	—
1931	65·7	31·5	22·1	9·5	34·2	10·4	11·7	10·8	9·2	14·2	104·5	40·9	62·1	42·4	71·2
1932	64·5	31·5	22·4	9·2	33·0	10·6	11·8	10·8	9·0	13·2	103·7	41·3	62·8	40·8	71·6
1933	62·7	32·1	22·9	9·3	30·6	11·0	11·8	9·8	8·6	12·2	102·5	41·4	63·4	39·1	72·3
1934	59·3	31·4	22·7	8·7	27·9	10·9	11·8	8·9	7·7	11·3	96·7	40·5	62·2	34·5	70·5
1935	57·0	30·4	22·0	8·4	26·6	10·7	11·3	9·1	7·7	9·8	95·4	40·7	61·9	33·5	69·9
1936	58·7	30·2	21·9	8·2	28·5	10·7	11·3	9·3	8·3	10·9	95·9	39·7	60·8	35·2	68·7
1937	57·7	29·7	22·0	7·8	28·0	10·8	11·2	9·4	8·3	10·3	94·4	39·0	60·2	34·2	67·6
1938	52·8	28·3	21·1	7·1	24·5	10·3	10·8	8·2	7·3	9·0	88·9	38·3	58·6	30·4	65·5
1939	50·6	28·3	21·2	7·1	22·2	10·3	10·9	7·9	7·0	7·3	86·9	38·1	58·5	28·4	65·3
1940	56·8	29·6	21·3	8·3	27·2	9·8	11·5	9·3	8·2	9·7	92·5	37·2	57·7	34·7	65·7
1941	60·0	29·0	20·7	8·3	31·1	10·1	10·6	11·3	9·7	10·1	92·4	34·8	54·7	37·7	62·7
1942	50·6	27·2	19·6	7·7	23·4	9·6	10·0	8·7	7·5	7·2	81·1	33·2	52·1	29·0	59·4
1943	49·1	25·2	18·3	6·9	23·9	9·1	9·2	8·8	7·8	7·3	77·5	30·1	47·9	29·6	54·6
1944	45·4	24·4	17·5	6·9	21·1	8·8	8·8	8·0	7·0	6·1	70·9	27·6	44·5	26·3	51·1
1945	46·0	24·8	18·0	6·8	21·3	9·0	9·0	8·2	7·0	6·1	73·4	27·6	45·2	28·1	51·8
1946	42·9	24·5	17·8	6·7	18·4	8·7	9·1	7·1	6·1	5·2	66·9	27·2	44·3	22·6	50·7
1947	41·4	22·7	16·5	6·2	18·6	7·8	8·7	6·9	6·0	5·7	65·0	24·1	40·3	24·6	46·4
1948	33·9	19·7	15·6	4·1	14·2	7·8	7·9	5·5	4·8	3·9	56·9	23·2	38·5	18·4	42·5
1949	32·4	19·3	15·6	3·7	13·0	7·6	8·0	4·8	4·4	3·8	54·6	22·7	38·0	16·7	41·5
1950	29·6	18·5	15·2	3·3	11·1	7·2	8·0	4·3	3·7	3·1	51·7	22·6	37·4	14·3	40·7
1951	29·7	18·8	15·5	3·3	10·9	7·5	8·0	4·1	3·6	3·2	52·2	23·0	38·2	14·0	41·5
1952	27·6	18·3	15·2	3·2	9·3	7·6	7·6	3·7	3·0	2·6	49·6	22·7	37·5	12·1	40·6
1953	26·8	17·7	14·8	2·9	9·1	7·4	7·4	3·4	3·0	2·7	48·6	22·4	36·9	11·7	39·7
1954	25·4	17·7	14·9	2·8	7·7	7·6	7·4	3·0	2·6	2·1	48·4	23·5	38·1	10·3	40·8

* Rates based on related live births from 1926 onwards.

† The births which these rates are based for successive calendar years are numbers registered up to 1938 inclusive and numbers of occurrences from 1939.

Table XLI.—Infant Mortality per 1,000 Related Live Births, and combined Stillbirth and Infant Death Rates per 1,000 Total Births, according to Age. England and Wales, and Aggregates summary (by type of area) within Regional Groups, 1954

Regional groups and aggregates summary (by type of area)	Total infant mortality (under 1 year)	Infant mortality per 1,000 related live births at various ages									Stillbirths and infant deaths. Rates per 1,000 total births				
		Neonatal mortality (under 4 weeks)	Early neonatal mortality (under 1 week)	Late neonatal mortality (1 week and under 4 weeks)	Post-neonatal mortality (4 weeks and under 1 year)	Early neonatal period		Post-neonatal period			Stillbirths plus infant deaths under 1 year	Stillbirths (late fœtal deaths at or over 28 weeks gestation)	Stillbirths plus infant deaths under 1 week	Infant deaths at 1 week and over	Stillbirths plus infant deaths under 4 weeks
						Under 1 day	1 day and under 1 week	4 weeks and under 3 months	3 months and under 6 months	6 months and under 1 year					
ENGLAND AND WALES	**25·42**	**17·73**	**14·91**	**2·82**	**7·69**	**7·57**	**7·35**	**3·01**	**2·59**	**2·09**	**48·36**	**23·48**	**38·05**	**10·31**	**40·80**
Conurbations	24·19	17·01	14·45	2·56	7·18	7·74	6·71	2·91	2·51	1·76	46·59	22·91	37·03	9·56	39·54
Other urban areas :															
with populations of 100,000 and over	26·96	18·28	15·51	2·77	8·68	7·91	7·61	3·49	2·91	2·28	50·86	24·50	39·64	11·22	42·34
with populations of 50,000 and under 100,000	26·52	18·68	15·57	3·11	7·84	7·99	7·58	2·92	2·43	2·49	50·38	24·45	39·64	10·74	42·68
with populations under 50,000 ..	27·03	18·90	15·82	3·08	8·13	7·67	8·16	3·05	2·68	2·40	50·60	24·16	39·61	10·99	42·61
Rural Districts	24·54	17·07	14·14	2·93	7·47	6·72	7·42	2·85	2·52	2·10	46·80	22·77	36·59	10·21	39·45
NORTH OF ENGLAND .. .. (Northern, E. and W. Ridings, N. Western)	28·88	19·64	16·54	3·10	9·24	8·43	8·11	3·79	3·05	2·40	53·99	25·80	41·91	12·08	44·94
Conurbations (Tyneside, W. Yorks., S.E. Lancs., Merseyside)	28·98	19·59	16·55	3·04	9·39	8·66	7·89	4·10	3·14	2·15	54·33	26·05	42·17	12·16	45·13
Other urban areas :															
with populations of 100,000 and over	29·54	19·60	16·85	2·75	9·94	8·50	8·35	4·25	3·13	2·56	54·71	25·87	42·29	12·42	44·97
with populations of 50,000 and under 100,000	31·20	21·70	18·13	3·57	9·50	9·93	8·20	3·39	2·78	3·33	55·81	25·32	43·00	12·81	46·48
with populations under 50,000 ..	28·89	19·91	16·50	3·41	8·98	7·99	8·50	3·46	2·87	2·65	54·56	26·36	42·43	12·13	45·75
Rural Districts	26·40	18·19	15·27	2·92	8·21	7·23	8·04	2·92	3·05	2·24	50·02	24·21	39·11	10·91	41·97

MIDLANDS AND EASTERN .. (N. Midland, Midland, Eastern)	25·27	17·85	14·87	2·98	7·42	7·44	7·43	2·74	2·55	2·13	48·28	23·55	38·08	10·21	40·98
Conurbation (West Midlands) ..	25·64	17·90	14·54	3·36	7·74	7·73	6·81	2·88	2·73	2·13	48·34	23·24	37·45	10·89	40·73
Other urban areas :															
with populations of 100,000 and over	26·06	17·97	15·40	2·57	8·09	8·24	7·15	3·06	3·02	2·01	48·79	23·28	38·32	10·47	40·83
with populations of 50,000 and under 100,000	23·88	16·92	14·08	2·84	6·96	6 40	7·68	2·73	2·16	2·07	47·05	23·69	37·44	9·62	40·21
with populations under 50,000 ..	26·49	19·15	16·06	3·09	7·34	7·82	8·24	2·41	2·49	2·44	50·25	24·35	40·02	10·23	43·04
Rural Districts	23·95	16·93	14·04	2·89	7·02	6·78	7·26	2·72	2·34	1·96	46·65	23·20	36·92	9·73	39·74
SOUTH OF ENGLAND .. .. (London and S.E., Southern, S. Western)	21·41	15·30	13·09	2·21	6·11	6·90	6·19	2·26	2·11	1·74	41·71	20·70	33·51	8·19	35·69
Conurbation (Greater London) ..	19·55	14·48	12·58	1·90	5·07	6·94	5·64	1·89	1·88	1·30	39·23	20·04	32·37	6·86	34·23
Other urban areas :															
with populations of 100,000 and over	23·24	16·62	14·05	2·57	6·62	7·20	6·84	2·40	2·08	2·14	45·94	23·19	36·91	9·03	39·43
with populations of 50,000 and under 100,000	23·15	16·57	13·78	2·79	6·58	7·54	6·24	2·53	2·20	1·85	45·95	23·29	36·75	9·20	39·48
with populations under 50,000 ..	23·71	16·07	13·73	2·34	7·64	6·79	6·94	2·84	2·52	2·28	43·76	20·48	33·92	9·83	36·22
Rural Districts	22·56	15·63	13·07	2·56	6·93	6·51	6·56	2·52	2·31	2·10	42·62	20·47	33·27	9·35	35·78
WALES (including Monmouthshire) ..	31·51	21·48	17·31	4·17	10·03	7·50	9·81	4·49	3·26	2·28	58·04	27·33	44·17	13·87	48·23
Urban areas with populations of 100,000 and over	30·97	19·40	15·52	3·88	11·57	6·86	8·65	5·17	3·86	2·54	57·57	27·38	42·48	15·09	46·25
Urban area with population of 50,000 and under 100,000	49·42	33·78	28·15	*5·63*	*15·64*	*11·26*	*16·89*	*4·50*	*5·60*	*5·54*	90·52	43·10	70·04	*20·47*	75·43
Urban areas with populations under 50,000	31·72	22·61	18·61	4·00	9·11	8·60	10·01	4·10	3·08	1·93	58·00	27·09	45·20	12·80	49·08
Rural Districts	30·28	20·63	16·03	4·60	9·65	6·07	9·97	4·50	2·84	2·31	55·95	26·42	42·03	13·93	46·50

Table XLII.—Principal Causes of Death Under One Year; Death Rates per 1,000 Related Live Births in England and Wales and Four Regional Groups, 1954, showing the regional rates as percentages of corresponding national rates.

Ætiological Group	Cause of Death (and International Classification numbers)	Infant Mortality Rates per 1,000 related live births					Regional Rates per cent of England and Wales rate				
		England and Wales	North of England	Midlands and Eastern Regions	South of England	Wales	Englands and Wales	North of England	Midlands and Eastern Regions	South of England	Wales
ALL CAUSES	**All Causes**	25·42	28·88	25·27	21·41	31·51	*100*	*114*	*99*	*84*	*124*
	Congenital malformations (750-759)	4·69	5·16	4·77	4·03	5·75	*100*	*110*	*102*	*86*	*123*
	Total causes mainly of prenatal and natal origin other than congenital malformations	12·76	14·11	12·64	11·16	15·25	*100*	*111*	*99*	*87*	*120*
Prenatal and Natal Group (including congenital malformations)	Immaturity alone or primary to diseases other than of early infancy (774, 776)	4·76	5·59	4·34	4·02	6·42	*100*	*117*	*91*	*84*	*135*
	Attributed to maternal toxæmia (769)	0·19	0·13	0·24	0·17	*0·35*	*100*	*68*	*126*	*89*	*184*
	Ill-defined diseases of early infancy (773)	0·34	0·31	0·28	0·36	0·69	*100*	*91*	*82*	*106*	*203*
	Postnatal asphyxia and atelectasis (762)	3·70	3·88	3·89	3·41	3·52	*100*	*105*	*105*	*92*	*95*
	Intracranial and spinal injury at birth (760)	2·22	2·47	2·16	1·95	2·73	*100*	*111*	*97*	*88*	*123*
	Other birth injury (including maternal antepartum hæmorrhage) (761)	0·53	0·57	0·59	0·45	0·57	*100*	*108*	*111*	*85*	*108*
	Erythroblastosis (770)	0·68	0·75	0·80	0·53	0·77	*100*	*110*	*118*	*78*	*113*
	Hæmorrhagic disease of newborn (771)	0·33	0·40	0·35	0·26	*0·20*	*100*	*121*	*106*	*79*	*61*
	Total causes mainly of postnatal origin	6·60	8·20	6·49	4·98	8·48	*100*	*124*	*98*	*75*	*128*
Postnatal Group	Gastro-enteritis (including diarrhœa of newborn) (571, 764)	0·68	0·76	0·66	0·51	1·39	*100*	*112*	*97*	*75*	*204*
	Pneumonia and bronchitis (490-493, 763; 500-502)	4·03	5·15	3·96	2·97	4·78	*100*	*128*	*98*	*74*	*119*
	Causes classified as infective (001-138); others mainly infective in origin *	1·03	1·28	1·01	0·78	1·31	*100*	*124*	*98*	*76*	*127*
	Whooping cough ; measles (056, 085)	0·16	0·19	0·15	0·11	*0·35*	*100*	*119*	*94*	*69*	*219*
	Acute upper respiratory infections and influenza (470-475, 480-483)	0·08	0·12	*0·07*	*0·07*	*0·05*	*100*	*150*	*88*	*88*	*63*
	Otitis media and mastoiditis, empyema, pleurisy (391-393, 518, 519)	0·13	0·12	0·18	0·11	*0·10*	*100*	*92*	*138*	*85*	*77*
	Septicæmia, skin and subcutaneous tissue infections, sepsis of newborn (053, 690-698, 765-768)	0·17	0·25	0·18	0·09	*0·30*	*100*	*147*	*106*	*53*	*176*
	Tuberculosis, other than tuberculous meningitis (001-008, 011-019)	0·04	*0·05*	*0·03*	*0·03*	*0·02*	*100*	*125*	*75*	*75*	*50*

	Tuberculous meningitis (010)	*0·01*	*0·02*	*0·01*	*0·01*	—	*100*	*200*	*100*	*100*	—
	Meningococcal infections and non-meningococcal meningitis (057, 340)	0·33	0·40	0·30	0·29	*0·37*	*100*	*121*	*91*	*88*	*112*
	Causes classified as infective not specified above (remainder 001-138)	0·09	0·13	*0·08*	*0·06*	*0·12*	*100*	*144*	*89*	*67*	*133*
	Accidental mechanical suffocation from vomit, food, foreign body, or in cot (E921-E925) ..	0·64	0·80	0·66	0·48	0·82	*100*	*125*	*103*	*75*	*128*
	Lack of care, neglect (including foundlings), infanticide (E926, E980-E985)	0·13	0·12	0·18	0·12	*0·07*	*100*	*92*	*138*	*92*	*54*
	Other accidental causes (remainder E800-E999)	0·08	*0·08*	*0·02*	0·12	0·10	*100*	*100*	*25*	*150*	*125*
	Total causes remaining	1·37	1·40	1·37	1·24	2·03	*100*	*102*	*100*	*91*	*148*
UNCLASSIFIED											
	Neoplasms (140-239)	0·12	0·11	0·11	0·13	*0·17*	*100*	*92*	*92*	*108*	*142*
	Other remaining causes	1·25	1·29	1·25	1·11	1·86	*100*	*103*	*100*	*89*	*149*
Immaturity, or with mention of immaturity (774; 776; 760·5-773·5)		9·09	10·02	9·07	7·98	10·51	*100*	*110*	*100*	*88*	*116*
Immaturity alone, or primary to dis. other than of early infancy (774, 776)		4·76	5·59	4·34	4·02	6·42	*100*	*117*	*91*	*84*	*135*
Immaturity associated with diseases of early infancy (760·5-773·5)		4·32	4·43	4·73	3·96	4·09	*100*	*103*	*109*	*92*	*95*
All other causes (760·0-773·0 and remainder)		16·33	18·86	16·20	13·43	21·00	*100*	*115*	*99*	*82*	*129*

* 340, 391-393, 470-483, 518, 519, 690-698, 765-768.

Table XLIII.—Secular Trend of Total and Illegitimate Stillbirths per 1,000 total births, and of Total and Illegitimate Deaths in Early Neonatal, Late Neonatal and Post-neonatal Periods per 1,000 related live births. England and Wales. 1936-1954

		1936 to 1939	1940 to 1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
All Infants	Stillbirths (Late fœtal deaths at or over 28 weeks) — Annual rate	38·8	32·3	27·6	27·2	24·1	23·2	22·7	22·6	23·0	22·7	22·4	23·5
	per cent of 1936-39	*100*	*83*	*71*	*70*	*62*	*60*	*59*	*58*	*59*	*59*	*58*	*61*
	Early neonatal deaths (Under 1 week) — Annual rate	21·6	19·3	18·0	17·8	16·5	15·6	15·6	15·2	15·5	15·2	14·8	14·9
	per cent of 1936–39	*100*	*89*	*83*	*82*	*76*	*72*	*72*	*70*	*72*	*70*	*69*	*69*
	Late neonatal deaths (1 week and under 4 weeks) — Annual rate	7·6	7·5	6·8	6·7	6·2	4·1	3·7	3·3	3·3	3·2	2·9	2·8
	per cent of 1936–39	*100*	*99*	*89*	*88*	*82*	*54*	*49*	*43*	*43*	*42*	*38*	*37*
	Post-neonatal deaths (4 weeks and under 1 year) — Annual rate	25·8	25·1	21·3	18·4	18·6	14·2	13·0	11·1	10·9	9·3	9·1	7·7
	per cent of 1936–39	*100*	*97*	*83*	*71*	*72*	*55*	*50*	*43*	*42*	*36*	*36*	*30*
Illegitimate Infants	Stillbirths (Late fœtal deaths at or over 28 weeks) — Annual rate	49·6	39·9	31·5	33·2	30·6	31·6	29·5	29·1	31·6	29·7	29·8	29·2
	per cent of 1936–39	*100*	*80*	*64*	*67*	*62*	*64*	*59*	*59*	*64*	*60*	*60*	*59*
	Early neonatal deaths (Under 1 week) — Annual rate	34·4	28·1	24·3	23·7[a]	23·5	22·0	24·9	21·4	21·4	21·3	19·3	20·2
	per cent of 1936–39	*100*	*82*	*71*	*69*	*68*	*64*	*72*	*62*	*62*	*62*	*56*	*59*
	Late neonatal deaths (1 week and under 4 weeks) — Annual rate	10·9	10·7	10·0	9·6	9·9	5·5	4·8	4·5	4·3	3·9	3·2	3·5
	per cent of 1936–39	*100*	*98*	*92*	*88*	*91*	*50*	*44*	*41*	*39*	*36*	*29*	*32*
	Post-neonatal deaths (4 weeks and under 1 year) — Annual rate	41·6	35·8	30·5	26·9	24·7	17·9	15·1	13·6	12·8	9·8	10·6	8·3
	per cent of 1936–39	*100*	*86*	*73*	*65*	*59*	43	*36*	*33*	*31*	*24*	*25*	*20*

Table XLIV.—Stillbirth rates per 1,000 total births, and Death rates in the Neonatal and Post-neonatal Periods per 1,000 related live births. England and Wales, Standard Regions, 1950 to 1954

	Standard Regions	Rates in each year 1950 to 1954					Rates in 1951 to 1954 per cent of rate in 1950				
		1950	1951	1952	1953	1954	1950	1951	1952	1953	1954
STILLBIRTHS (at or over 28 weeks gestation) per 1,000 live and stillbirths	ENGLAND AND WALES	22·6	23·0	22·7	22·4	23·5	*100*	*102*	*100*	*99*	*104*
	NORTH OF ENGLAND	24·3	24·8	24·8	24·2	25·8	*100*	*102*	*102*	*100*	*106*
	Northern	25·8	24·6	24·9	23·3	24·8	*100*	*95*	*97*	*90*	*96*
	East and West Ridings	22·9	24·2	23·9	23·6	25·0	*100*	*106*	*104*	*103*	*109*
	North Western	24·4	25·2	25·2	25·0	26·8	*100*	*103*	*103*	*102*	*110*
	MIDLANDS AND EASTERN REGIONS	22·6	23·1	22·2	22·2	23·6	*100*	*102*	*98*	*98*	*104*
	North Midland	23·0	23·1	22·5	22·9	24·1	*100*	*100*	*98*	*100*	*105*
	Midland	23·8	23·9	22·7	23·3	24·4	*100*	*100*	*95*	*98*	*103*
	Eastern	20·6	21·9	21·1	20·0	21·8	*100*	*106*	*102*	*97*	*106*
	SOUTH OF ENGLAND	20·1	20·9	20·2	20·4	20·7	*100*	*104*	*100*	*101*	*103*
	London and South Eastern	19·6	20·8	20·0	20·2	20·1	*100*	*106*	*102*	*103*	*103*
	Southern	18·9	19·4	20·0	21·0	20·5	*100*	*103*	*106*	*111*	*108*
	South Western	22·5	22·3	21·0	20·4	23·0	*100*	*99*	*93*	*91*	*102*
	WALES (including Monmouthshire)	27·2	26·4	28·0	25·3	27·3	*100*	*97*	*103*	*93*	*100*
NEONATAL MORTALITY per 1,000 related live births	ENGLAND AND WALES	18·5	18·8	18·3	17·7	17·7	*100*	*102*	*99*	*96*	*96*
	NORTH OF ENGLAND	20·2	20·6	20·3	19·7	19·6	*100*	*102*	*100*	*98*	*97*
	Northern	20·8	21·6	20·2	19·3	20·4	*100*	*104*	*97*	*93*	*98*
	East and West Ridings	19·5	19·1	18·9	19·8	18·1	*100*	*98*	*97*	*102*	*93*
	North Western	20·3	20·9	21·1	19·9	20·2	*100*	*103*	*104*	*98*	*100*
	MIDLANDS AND EASTERN REGIONS	18·4	18·5	18·0	17·7	17·9	*100*	*101*	*98*	*96*	*97*
	North Midland	18·9	17·6	18·9	18·0	18·0	*100*	*93*	*100*	*95*	*95*
	Midland	19·4	20·3	18·6	18·9	19·4	*100*	*105*	*96*	*97*	*100*
	Eastern	16·3	16·8	16·2	15·7	15·5	*100*	*103*	*99*	*96*	*95*
	SOUTH OF ENGLAND	16·5	17·0	16·4	15·4	15·3	*100*	*103*	*99*	*93*	*93*
	London and South Eastern	15·9	16·7	15·7	15·0	14·8	*100*	*105*	*99*	*94*	*93*
	Southern	16·7	16·9	16·3	15·4	16·2	*100*	*101*	*98*	*92*	*97*
	South Western	18·5	18·2	18·8	16·5	16·3	*100*	*98*	*102*	*89*	*88*
	WALES (including Monmouthshire)	21·6	21·8	20·8	19·7	21·5	*100*	*101*	*96*	*91*	*100*
POST-NEONATAL MORTALITY per 1,000 related live births	ENGLAND AND WALES	11·1	10·9	9·3	9·1	7·7	*100*	*98*	*84*	*82*	*69*
	NORTH OF ENGLAND	14·6	13·8	11·3	10·6	9·2	*100*	*95*	*77*	*73*	*63*
	Northern	16·9	15·5	11·9	11·6	9·2	*100*	*92*	*70*	*69*	*54*
	East and West Ridings	13·3	13·8	11·0	10·7	9·7	*100*	*104*	*83*	*80*	*73*
	North Western	14·2	13·0	11·3	10·0	9·0	*100*	*92*	*80*	*70*	*63*
	MIDLANDS AND EASTERN REGIONS	10·6	10·5	9·2	8·8	7·4	*100*	*99*	*87*	*83*	*70*
	North Midland	11·7	11·1	9·6	9·8	8·0	*100*	*95*	*82*	*84*	*68*
	Midland	11·8	11·3	10·2	8·9	7·9	*100*	*96*	*86*	*75*	*67*
	Eastern	7·6	8·6	7·1	7·6	6·2	*100*	*113*	*93*	*100*	*82*
	SOUTH OF ENGLAND	7·8	7·8	6·9	7·7	6·1	*100*	*100*	*88*	*99*	*78*
	London and South Eastern	7·8	7·4	6·9	7·6	5·5	*100*	*95*	*88*	*97*	*71*
	Southern	7·9	8·3	7·1	8·0	7·0	*100*	*105*	*90*	*101*	*89*
	South Western	7·9	8·3	6·8	8·1	7·2	*100*	*105*	*86*	*103*	*91*
	WALES (including Monmouthshire)	13·9	14·3	12·5	11·6	10·0	*100*	*103*	*90*	*83*	*72*

Table XLV.—Perinatal mortality (stillbirths and deaths under 1 week of age) and Post-perinatal mortality (deaths at ages from 1 week to 1 year): Numbers and rates per 1,000 total births in each County Borough and County Urban and Rural Aggregate in each of four regional groups within England and Wales, 1954

	Total births	Perinatal mortality		Post-perinatal mortality	
		Number	Rate	Number	Rate
NORTH OF ENGLAND					
Cheshire	19,731	815	41·31	223	11·30
County Boroughs	7,536	327	43·39	96	12·74
Birkenhead	2,669	114	42·71	35	13·11
Chester	948	31	32·70	13	13·71
Stockport	2,144	102	47·57	31	14·46
Wallasey	1,775	80	45·07	17	9·58
Administrative County					
Municipal Boroughs and Urban Districts	9,210	373	40·50	96	10·42
Rural Districts	2,985	115	38·53	31	10·39
Cumberland	4,804	219	45·59	57	11·87
Carlisle C.B.	1,155	63	54·55	12	10·39
Administrative County					
Urban Districts	1,554	53	34·11	21	13·51
Rural Districts	2,095	103	49·16	24	11·46
Derbyshire (part)	998	41	41·08	8	8·02
Municipal Boroughs and Urban Districts					
Buxton M.B. Glossop M.B. New Mills U.D. Whaley Bridge U.D.	734	32	43·60	5	6·81
Rural District					
Chapel en le Frith	264	9	34·09	3	11·36
Durham	26,506	1,112	41·95	352	13·28
County Boroughs	10,363	423	40·82	150	14·47
Darlington	1,279	46	35·97	20	15·64
Gateshead	1,998	88	44·04	22	11·01
South Shields	2,079	74	35·59	33	15·87
Sunderland	3,624	146	40·29	43	11·87
West Hartlepool	1,383	69	49·89	32	23·14
Administrative County					
Municipal Boroughs and Urban Districts	11,108	471	42·40	149	13·41
Rural Districts	5,035	218	43·30	53	10·53
Lancashire	82,254	3,615	43·95	991	12·05
County Boroughs	52,154	2,308	44·25	651	12·48
Barrow-in-Furness	1,051	45	42·82	5	4·76
Blackburn	1,471	59	40·11	15	10·20
Blackpool	1,637	85	51·92	17	10·38
Bolton	2,449	100	40·83	29	11·84
Bootle	1,701	73	42·92	26	15·29
Burnley	1,212	51	42·08	19	15·68
Bury	889	38	42·74	14	15·75
Liverpool	16,129	685	42·47	213	13·21
Manchester	12,228	588	48·09	149	12·19
Oldham	1,777	74	41·64	17	9·57
Preston	1,885	74	39·26	21	11·14
Rochdale	1,288	50	38·82	14	10·87
St. Helens	1,963	105	53·49	33	16·81
Salford	2,916	119	40·81	39	13·37
Southport	912	36	39·47	13	14·25
Warrington	1,381	65	47·07	17	12·31
Wigan	1,265	61	48·22	10	7·91

Table XLV.—*continued.*

	Total births	Perinatal mortality		Post-perinatal mortality	
		Number	Rate	Number	Rate
NORTH OF ENGLAND—*continued*					
Lancashire—*continued*					
Administrative County					
Municipal Boroughs and Urban Districts	25,728	1,139	44·27	294	11·43
Rural Districts	4,372	168	38·43	46	10·52
Northumberland	13,670	548	40·09	153	11·19
County Boroughs	6,228	267	42·87	61	9·79
Newcastle upon Tyne	4,998	203	40·62	48	9·60
Tynemouth	1,230	64	52·03	13	10·57
Administrative County					
Municipal Boroughs and Urban Districts	5,942	239	40·22	75	12·62
Rural Districts	1,500	42	28·00	17	11·33
Westmorland	884	29	32·81	4	4·52
Administrative County					
Municipal Boroughs and Urban Districts	379	12	31·66	—	—
Rural Districts	505	17	33·66	4	7·92
Yorkshire, East Riding	8,791	348	39·59	124	14·11
Kingston upon Hull C.B.	5,652	237	41·93	98	17·34
Administrative County					
Municipal Boroughs and Urban Districts	1,514	47	31·04	12	7·93
Rural Districts	1,625	64	39·38	14	8·62
Yorkshire, North Riding	9,389	376	40·05	121	12·89
Middlesbrough C.B.	3,136	138	44·01	43	13·71
Administrative County					
Municipal Boroughs and Urban Districts	3,602	150	41·64	52	14·44
Rural Districts	2,651	88	33·20	26	9·81
Yorkshire, West Riding	55,376	2,219	40·07	653	11·79
County Boroughs	30,417	1,207	39·68	353	11·61
Barnsley	1,293	48	37,12	23	17·79
Bradford	4,749	185	38·96	71	14·95
Dewsbury	938	50	53·30	19	20·26
Doncaster	1,354	61	45·05	14	10·34
Halifax	1,447	57	39·39	22	15·20
Huddersfield	1,880	68	36·17	20	10·64
Leeds	7,774	308	39·62	80	10·29
Rotherham	1,375	52	37·82	17	12·36
Sheffield	7,052	271	38·43	68	9·64
Wakefield	954	37	38·78	9	9·43
York	1,601	70	43·72	10	6·25
Administrative County					
Municipal Boroughs and Urban Districts	17,619	733	41·60	210	11·92
Rural Districts	7,340	279	38·01	90	12·26
Summary :					
Total County Boroughs	*116,641*	*4,970*	*42·61*	*1,464*	*12·55*
Total Municipal Boroughs and Urban Districts	*77,390*	*3,249*	*41·98*	*914*	*11·81*
Total Rural Districts	*28,372*	*1,103*	*38·88*	*308*	*10·86*

Table XLV.—*continued.*

	Total births	Perinatal mortality		Post-perinatal mortality	
		Number	Rate	Number	Rate
MIDLANDS AND EASTERN REGIONS					
Bedfordshire	5,058	194	38·36	56	11·07
Administrative County					
Municipal Boroughs and Urban Districts	3,442	145	42·13	33	9·59
Rural Districts	1,616	49	30·32	23	14·23
Cambridgeshire	2,571	110	42·78	20	7·78
Administrative County					
Cambridge M.B.	1,209	46	38·05	9	7·44
Rural Districts	1,362	64	46·99	11	8·08
Derbyshire (other than those areas stated in North of England)	11,917	481	40·36	144	12·08
Derby C.B.	2,122	73	34·40	29	13·67
Administrative County					
Municipal Boroughs and Urban Districts	4,681	203	43·37	58	12·39
Rural Districts	5,114	205	40·09	57	11·15
Ely, Isle of	1,409	39	27·68	10	7·10
Administrative County					
Municipal Boroughs and Urban Districts	858	22	25·64	7	8·16
Rural Districts	551	17	30·85	3	5·44
Essex (other than those areas stated in South of England)	16,891	560	33·15	147	8·70
Southend-on-Sea C.B.	2,055	49	23·84	16	7·79
Administrative County					
Municipal Boroughs and Urban Districts	10,685	365	34·16	92	8·61
Rural Districts	4,151	146	35·17	39	9·40
Herefordshire	2,036	92	45·19	25	12·28
Administrative County					
Urban Districts	834	39	46·76	11	13·19
Rural Districts	1,202	53	44·09	14	11·65
Hertfordshire (other than those areas stated in South of England)	8,737	275	31·48	54	6·18
Administrative County					
Municipal Boroughs and Urban Districts	5,835	191	32·73	33	5·66
Rural Districts	2,902	84	28·95	21	7·24
Huntingdonshire	1,211	42	34·68	17	14·04
Administrative County					
Municipal Boroughs and Urban Districts	533	14	26·27	7	13·13
Rural Districts	678	28	41·30	10	14·75
Leicestershire	9,873	408	41·32	104	10·53
Leicester C.B.	4,545	175	38·50	48	10·56
Administrative County					
Municipal Boroughs and Urban Districts	2,559	126	49·24	24	9·38
Rural Districts	2,769	107	38·64	32	11·56

Table XLV.—*continued.*

	Total births	Perinatal mortality		Post-perinatal mortality	
		Number	Rate	Number	Rate
MIDLANDS AND EASTERN REGIONS—*continued*					
Lincolnshire (parts of Holland) ..	1,764	77	43·65	21	11·90
Administrative County					
Municipal Boroughs and Urban Districts	654	23	35·17	5	7·65
Rural Districts	1,110	54	48·65	16	14·41
Lincolnshire (parts of Kesteven)	2,152	76	35·32	27	12·55
Administrative County					
Municipal Boroughs and Urban Districts	717	27	37·66	9	12·55
Rural Districts	1,435	49	34·15	18	12·54
Lincolnshire (parts of Lindsey) ..	8,193	317	38·69	84	10·25
County Boroughs	2,887	118	40·87	28	9·70
Grimsby	1,752	67	38·24	19	10·84
Lincoln	1,135	51	44·93	9	7·93
Administrative County					
Municipal Boroughs and Urban Districts	2,679	103	38·45	36	13·44
Rural Districts	2,627	96	36·54	20	7·61
Norfolk	8,501	300	35·29	85	10·00
County Boroughs	2,641	91	34·46	32	12·12
Great Yarmouth	800	23	28·75	12	15·00
Norwich	1,841	68	36·94	20	10·86
Administrative County					
Municipal Boroughs and Urban Districts	1,208	45	37·25	6	4·97
Rural Districts	4,652	164	35·25	47	10·10
Northamptonshire	5,822	208	35·73	49	8·42
Northampton C.B.	1,409	52	36·91	6	4·26
Administrative County					
Municipal Boroughs and Urban Districts	2,360	97	41·10	32	13·56
Rural Districts	2,053	59	28·74	11	5·36
Nottinghamshire	13,925	516	37·06	161	11·56
Nottingham C.B.	5,073	158	31·15	66	13·01
Administrative County					
Municipal Boroughs and Urban Districts	6,125	239	39·02	68	11·10
Rural Districts	2,727	119	43·64	27	9·90
Peterborough, Soke of	1,067	30	28·12	9	8·43
Administrative County					
Peterborough M.B.	841	22	26·16	8	9·51
Rural Districts	226	8	35·40	1	4·42
Rutland	406	14	34·48	4	9·85
Administrative County					
Urban District	72	1	13·89	—	—
Rural Districts	334	13	38·92	4	11·98
Shropshire	4,615	188	40·74	39	8·45
Administrative County					
Municipal Boroughs and Urban Districts	2,287	101	44·16	21	9·18
Rural Districts	2,328	87	37·37	18	7·73

Table XLV.—*continued.*

	Total births	Perinatal mortality		Post-perinatal mortality	
		Number	Rate	Number	Rate
MIDLANDS AND EASTERN REGIONS—*continued*					
Staffordshire	26,407	1,194	45·22	313	11·85
County Boroughs	12,427	583	46·91	155	12·47
Burton-upon-Trent	840	30	35·71	7	8·33
Smethwick	1,059	53	50·05	13	12·28
Stoke-on-Trent	4,428	224	50·59	58	13·10
Walsall	2,003	80	39·94	27	13·48
West Bromwich	1,556	69	44·34	19	12·21
Wolverhampton	2,541	127	49·98	31	12·20
Admin istrative County					
Municipal Boroughs and Urban Districts	10,489	451	43·00	128	12·20
Rural Districts	3,491	160	45·83	30	8·59
Suffolk, East	5,386	180	33·42	42	7·80
Ipswich C.B.	1,982	59	29·77	12	6·05
Administrative County					
Municipal Boroughs and Urban Districts	146	60	41·07	13	8·90
Rural Districts	1,943	61	31·39	17	8·75
Suffolk, West	1,994	82	41·12	15	7·52
Administrative County					
Municipal Boroughs and Urban Districts	712	35	49·16	3	4·21
Rural Districts	1,282	47	36·66	12	9·36
Warwickshire	31,394	1,160	36·95	313	9.97
County Boroughs	23,116	865	37·42	235	10·17
Birmingham	18,793	653	34·75	194	10·32
Coventry	4,323	212	49·04	41	9·48
Administrative County					
Urban Districts	5,218	203	38·90	44	8·43
Rural Districts	3,060	92	30·07	34	11·11
Worcestershire	8,089	289	35·73	92	11·37
County Boroughs	1,965	66	33·59	26	13·23
Dudley	987	30	30·40	17	17·22
Worcester	978	36	36·81	9	9·20
Administrative County					
Municipal Boroughs and Urban Districts	4,350	156	35·86	48	11·03
Rural Districts	1,774	67	37·77	18	10·15
Summary :					
Total County Boroughs	*60,222*	*2,289*	*38·01*	*653*	*10·84*
Total Municipal Boroughs and Urban Districts	*69,809*	*2,714*	*38·88*	*695*	*9·96*
Total Rural Districts	*49,387*	*1,829*	*37·03*	*483*	*9·78*
SOUTH OF ENGLAND					
Berkshire	7,080	237	33·47	63	8·90
Reading C.B.	1,698	58	34·16	21	12·37
Administrative County					
Municipal Boroughs and Urban Districts	1,711	60	35·07	12	7·01
Rural Districts	3,671	119	32·42	30	8·17

Table XLV.—*continued.*

	Total births	Perinatal mortality		Post-perinatal mortality	
		Number	Rate	Number	Rate
SOUTH OF ENGLAND—*continued*					
Buckinghamshire	6,390	187	29·26	58	9·08
Administrative County					
Municipal Boroughs and Urban Districts	3,099	98	31·62	22	7·10
Rural Districts	3,291	89	27·04	36	10·94
Cornwall	5,004	208	41·57	51	10·19
Administrative County					
Municipal Boroughs and Urban Districts	2,684	124	46·20	31	11·55
Rural Districts	2,320	84	36·21	20	8·62
Devon	11,649	439	37·69	132	11·33
County Boroughs	4,820	198	41·08	58	12·03
Exeter	1,154	56	48·53	15	13·00
Plymouth	3,666	142	38·73	43	11·73
Administrative County					
Municipal Boroughs and Urban Districts	3,241	125	38·57	40	12·34
Rural Districts	3,588	116	32·33	34	9·48
Dorset	4,415	164	37·15	37	8·38
Administrative County					
Municipal Boroughs and Urban Districts	2,654	103	38·81	24	9·04
Rural Districts	1,761	61	34·64	13	7·38
Essex (part)	14,377	526	36·59	98	6·82
County Boroughs	4,345	166	38·20	28	6·44
East Ham	1,543	50	32·40	6	3·89
West Ham	2,802	116	41·40	22	7·85
Municipal Boroughs and Urban Districts					
Chingford M.B. ..					
Wanstead and Woodford M.B.					
Leyton M.B.					
Walthamstow M.B. ..	10,032	360	35·89	70	6·98
Ilford M.B.					
Barking M.B.					
Dagenham M.B. ..					
Waltham Holy Cross U.D.					
Chigwell U.D.					
Gloucestershire	15,216	546	35·88	128	8·41
County Boroughs	8,020	280	34·91	61	7·61
Bristol	6,863	250	36·43	49	7·14
Gloucester	1,157	30	25·93	12	10·37
Administrative County					
Municipal Boroughs and Urban Districts	2,393	98	40·95	22	9·19
Rural Districts	4,803	168	34·98	45	9·37

Table XLV.—*continued.*

	Total births	Perinatal mortality		Post-perinatal mortality	
		Number	Rate	Number	Rate
SOUTH OF ENGLAND—*continued*					
Hertfordshire (part)	1,950	68	34·87	17	8·72
Urban Districts					
Barnet U.D.					
Bushey U.D.					
Cheshunt U.D.	1,482	49	33·06	14	9·45
East Barnet U.D. ..					
Rural District					
Elstree	468	19	40·60	3	6·41
Kent	23,875	803	33·63	209	8·75
Canterbury C.B.	481	19	39·50	3	6·24
Administrative County					
Municipal Boroughs and Urban Districts	18,333	621	33·87	161	8·78
Rural Districts	5,061	163	32·21	45	8·89
London					
Administrative County	51,774	1,699	32·82	377	7·28
Middlesex					
Municipal Boroughs and Urban Districts	30,166	910	30·17	194	6·43
Oxfordshire	4,727	151	31·94	36	7·62
Oxford C.B.	1,496	46	30·75	13	8·69
Administrative County					
Municipal Boroughs and Urban Districts	823	25	30·38	6	7·29
Rural Districts	2,408	80	33·22	17	7·06
Somerset	8,203	283	34·50	69	8·41
Bath C.B.	1,073	46	42·87	6	5·59
Administrative County					
Municipal Boroughs and Urban Districts	3,343	101	30·21	24	7·18
Rural Districts	3,787	136	35·91	39	10·30
Southampton	19,693	684	34·73	206	10·46
County Boroughs	8·680	318	36·64	82	9·45
Bournemouth	1,616	58	35·89	9	5·57
Portsmouth	3,817	138	36·15	46	12·05
Southampton	3,247	122	37·57	27	8·32
Administrative County					
Municipal Boroughs and Urban Districts	6,305	214	33·94	73	11·58
Rural Districts	4,708	152	32·29	51	10·83
Surrey	22,110	679	30·71	173	7·82
Croydon C.B.	3,617	119	32·90	29	8·02
Administrative County					
Municipal Boroughs and Urban Districts	16,289	480	29·47	121	7·43
Rural Districts	2,204	80	36·30	23	10·44

Table XLV.—*continued.*

	Total births	Perinatal mortality		Post-perinatal mortality	
		Number	Rate	Number	Rate
SOUTH OF ENGLAND—*continued*					
Sussex, East	7,566	233	30·80	54	7·14
County Boroughs	3,497	118	33·74	26	7·43
Brighton	2,123	82	38·62	13	6·12
Eastbourne	626	13	20·77	6	9·58
Hastings	748	23	30·75	7	9·36
Administrative County					
Municipal Boroughs and Urban Districts	2,128	64	30·08	13	6·11
Rural Districts	1,941	51	26·28	15	7·73
Sussex, West	4,778	180	37·67	40	8·37
Administrative County					
Municipal Boroughs and Urban Districts	2,153	87	40·41	21	9·75
Rural Districts	2,625	93	35·43	19	7·24
Wight, Isle of	1,272	49	38·52	15	11·79
Administrative County					
Municipal Boroughs and Urban Districts	1,036	41	39·58	14	13·51
Rural District	236	8	33·90	1	4·24
Wiltshire	6,398	220	34·39	64	10·00
Administrative County					
Municipal Boroughs and Urban Districts	3,021	97	32·11	24	7·94
Rural Districts	3,377	123	36·42	40	11·84
Summary :					
Total County Boroughs	*37,727*	*1,368*	*36,26*	*327*	*8·67*
Total Municipal Boroughs and Urban Districts	*162,667*	*5,356*	*32·93*	*1,263*	*7·76*
Total Rural Districts	*46,249*	*1,542*	*33·34*	*431*	*9·32*
WALES (including Monmouthshire)					
Anglesey	832	33	39·66	11	13·22
Administrative County					
Municipal Boroughs and Urban Districts	344	14	40·70	3	8·72
Rural Districts	488	19	38·93	8	16·39
Brecknockshire	839	31	36·95	10	11·92
Administrative County					
Municipal Boroughs and Urban Districts	225	11	48·89	4	17·78
Rural Districts	614	20	32·57	6	9·77
Caernarvonshire	1,678	76	45·29	15	8·94
Administrative County					
Municipal Boroughs and Urban Districts	982	37	37·68	7	7·13
Rural Districts	696	39	56·03	8	11·49
Cardiganshire	731	31	42·41	10	13·68
Administrative County					
Municipal Boroughs and Urban Districts	232	12	51·17	2	8·62
Rural Districts	499	19	38·08	8	16·03

Table XLV.—*continued.*

	Total births	Perinatal mortality		Post-perinatal mortality	
		Number	Rate	Number	Rate
WALES—*continued*					
Carmarthenshire	2,363	103	43·59	35	14·81
Administrative County					
Municipal Boroughs and Urban Districts	933	43	46·09	10	10·72
Rural Districts	1,430	60	41·96	25	17·48
Denbighshire	2,589	103	39·78	30	11·59
Administrative County					
Municipal Boroughs and Urban Districts	1,101	41	37·24	10	9·08
Rural Districts	1,488	62	41·67	20	13·44
Flintshire	2,259	78	34·53	20	8·85
Administrative County					
Municipal Boroughs and Urban Districts	1,179	33	27·99	13	11·03
Rural Districts	1,080	45	41·67	7	6·48
Glamorganshire	19,921	916	45·98	292	14·66
County Boroughs	7,989	350	43·81	126	15·77
Cardiff	4,609	190	41·22	77	16·71
Merthyr Tydfil	928	65	70·04	19	20·47
Swansea	2,452	95	38·74	30	12·23
Administrative County					
Municipal Boroughs and Urban Districts	8,792	427	48·57	117	13·31
Rural Districts	3,140	139	44·27	49	15·61
Merionethshire	520	13	25·00	5	9·62
Administrative County					
Urban Districts	248	6	24·19	2	8·06
Rural Districts	272	7	25·74	3	11·03
Monmouthshire	7,088	340	47·97	113	15·94
Newport C.B.	1,671	72	43·09	24	14·36
Administrative County					
Municipal Boroughs and Urban Districts	4,675	235	50·27	80	17·11
Rural Districts	742	33	44·47	9	12·13
Montgomeryshire	719	29	40·33	5	6·95
Administrative County					
Municipal Boroughs and Urban Districts	273	10	36·63	1	3·66
Rural Districts	446	19	42·60	4	8·97
Pembrokeshire	1,587	66	41·59	24	15·12
Administrative County					
Municipal Boroughs and Urban Districts	807	38	47·09	10	12·39
Rural Districts	780	28	35·90	14	17·95

Table XLV.—*continued.*

	Total births	Perinatal mortality		Post-perinatal mortality	
		Number	Rate	Number	Rate
WALES—*continued*					
Radnorshire	261	9	34·48	4	15·33
Administrative County					
Urban Districts	87	1	11·49	—	—
Rural Districts	174	8	45·98	4	22·99
Summary :					
Total County Boroughs	*9,660*	*422*	*43·69*	*150*	*15·53*
Total Municipal Boroughs and Urban Districts	*19,878*	*908*	*45·68*	*259*	*13·03*
Total Rural Districts	*11,849*	*498*	*42·03*	*165*	*13·93*
ENGLAND AND WALES					
Total County Boroughs	**224,250**	**9,049**	**40·35**	**2,594**	**11·57**
Total Municipal Boroughs and Urban Districts	**329,744**	**12,227**	**37·08**	**3,131**	**9·50**
Total Rural Districts	**135,857**	**4,972**	**36·60**	**1,387**	**10·21**

Table XLVI.—Live Births by Age and Parity* of Mother and Place of Confinement, 1954, England and Wales

Note : Institutions described as Non-N.H.S. Hospitals are mainly Maternity Homes.

Age Group	PARITY OF MOTHER															
	0				1				2				3			
	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other
All Ages	**213,420**	**13,681**	**43,622**	**7,910**	**103,240**	**10,382**	**73,443**	**5,536**	**42,766**	**4,224**	**52,958**	**1,767**	**18,152**	**1,340**	**29,656**	**585**
Under 20	21,214	970	4,889	1,163	1,710	120	1,153	129	128	8	159	11	3	3	7	—
20–	92,541	5,257	19,373	4,150	26,730	1,751	20,744	2,235	6,082	349	8,340	411	1,406	64	2,558	94
25–	61,026	4,552	11,494	1,958	38,186	3,828	29,250	2,111	13,462	1,124	19,551	757	4,810	246	9,369	223
30–	26,781	2,126	5,313	505	25,236	3,278	16,787	848	13,776	1,569	16,871	451	6,121	524	10,964	179
35–	8,678	604	1,786	94	8,769	1,140	4,517	185	6,848	898	6,414	111	3,994	367	5,118	73
40–	2,624	138	556	21	2,368	241	803	15	2,256	259	1,462	22	1,685	130	1,490	14
45 & over	148	7	34	1	110	9	22	—	144	10	56	1	103	4	80	1
Not stated	408	27	177	18	131	15	167	13	70	7	105	3	30	2	70	1

Age Group	4				5 and over				Total			
	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other
All Ages	**8,414**	**435**	**14,921**	**165**	**10,259**	**287**	**16,311**	**177**	**396,251**	**30,349**	**230,911**	**16,140**
Under 20	—	—	2	—	1	—	—	—	23,056	1,101	6,210	1,303
20–	331	14	588	19	77	3	146	—	127,167	7,438	51,749	6,909
25–	1,864	79	4,000	56	1,038	27	2,129	44	120,386	9,856	75,793	5,149
30–	2,818	153	5,690	57	3,032	92	5,559	66	77,764	7,742	61,184	2,106
35–	2,229	125	3,373	24	3,404	102	5,296	41	33,922	3,236	26,504	528
40–	1,086	60	1,171	9	2,413	54	2,892	22	12,432	882	8,374	103
45 & over	74	3	64	—	283	7	241	3	862	40	497	6
Not stated	12	1	33	—	11	2	48	1	662	54	600	36

* "Parity" in this instance means the number of previous liveborn children.

Table XLVII.—Stillbirths by Age and Parity* of Mother and Place of Confinement, 1954, England Wales

Note : Institutions described as Non-N.H.S. Hospitals are mainly Maternity Homes.

Age Group	PARITY OF MOTHER															
	0				1				2				3			
	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other
All Ages ..	**6,114**	**248**	**972**	**168**	**2,376**	**111**	**844**	**53**	**1,499**	**58**	**661**	**17**	**831**	**28**	**409**	**4**
Under 20 ..	475	13	111	21	25	—	10	—	2	—	—	—	—	—	—	—
20– ..	2,212	67	355	51	484	18	208	18	155	2	85	1	50	2	22	—
25– ..	1,716	80	247	34	794	32	283	18	410	14	201	5	169	4	102	1
30– ..	1,025	56	146	15	644	35	219	12	501	20	208	6	287	10	143	3
35– ..	427	18	64	4	309	18	85	5	297	17	125	4	208	6	97	—
40– ..	144	9	17	3	112	8	33	—	120	3	38	1	100	6	42	—
45 and over	8	1	3	—	4	—	2	—	13	2	3	—	12	—	1	—
Not stated..	107	4	29	40	4	—	4	—	1	—	1	—	5	—	2	—

Age Group	4				5 and over				Total			
	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other
All Ages ..	**421**	**13**	**272**	**5**	**713**	**10**	**369**	**4**	**11,954**	**468**	**3,527**	**251**
Under 20 ..	—	—	—	—	—	—	—	—	502	13	121	21
20– ..	7	—	5	—	3	—	—	—	2,911	89	675	70
25– ..	77	—	52	2	53	—	25	—	3,219	130	910	60
30– ..	144	2	92	1	173	1	96	3	2,774	124	904	40
35– ..	116	9	74	2	260	4	125	1	1,617	72	570	16
40– ..	66	1	42	—	183	5	108	—	725	32	280	4
45 and over	9	1	5	—	38	—	15	—	84	4	29	—
Not stated..	2	—	2	—	3	—	—	—	122	4	38	40

* "Parity" in this instance means the number of previous liveborn children.

Table XLVIII.—Stillbirth Rates per 1,000 Total Births, by Age and Parity* of Mother and Place of Confinement, 1954, England and Wales

Note : Institutions described as Non-N.H.S. Hospitals are mainly Maternity Homes.

Age Group	PARITY OF MOTHER															
	0				1				2				3			
	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other
All Ages ..	28	18	22	21	22	11	11	9	34	14	12	*10*	44	20	14	*7*
Under 20 ..	22	*13*	22	18	14	—	*9*	—	*15*	—	—	—	—	—	—	—
20– ..	23	13	18	12	18	*10*	10	*8*	25	*6*	10	*2*	34	*30*	9	—
25– ..	27	17	21	17	20	8	10	*8*	30	*12*	10	*7*	34	*16*	11	*4*
30– ..	37	26	27	*29*	25	11	13	*14*	35	13	12	*13*	45	*19*	13	*16*
35– ..	47	*29*	35	*41*	34	*16*	18	*26*	42	*19*	19	*35*	50	*16*	19	—
40 and over	52	*65*	33	*120*	45	*31*	41	—	53	*18*	26	*42*	59	*43*	27	—
Not stated..	208	*129*	141	690	*30*	—	*23*	—	*14*	—	*9*	—	*143*	—	*28*	—

Age Group	4				5 and over				Total			
	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other
All Ages ..	48	*29*	18	*29*	65	*34*	22	*22*	29	15	15	15
Under 20 ..	—	—	—	—	—	—	—	—	21	*12*	19	16
20– ..	*21*	—	*8*	—	*38*	—	—	—	22	12	13	10
25– ..	40	—	13	*34*	49	—	12	—	26	13	12	12
30– ..	49	*13*	16	*17*	54	*11*	17	*43*	34	16	15	19
35– ..	49	*67*	21	*77*	71	*38*	23	*24*	45	22	21	*29*
40 and over	61	*31*	37	—	76	*76*	38	—	57	38	34	*35*
Not stated..	*143*	—	*57*	—	*214*	—	—	—	156	*69*	60	526

* "Parity" in this instance means the number of previous liveborn children.

Table XLIX.—Percentage distribution of Births for each Place of Confinement within each Age and Parity* group, 1954, England and Wales

Note : Institutions described as Non-N.H.S. Hospitals are mainly Maternity Homes.

Age Group	PARITY OF MOTHER															
	0				1				2				3			
	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other
All Ages ..	76	5	16	3	54	5	38	3	43	4	51	2	37	3	59	1
Under 20 ..	76	3	17	4	55	4	37	4	42	*3*	51	*4*	*23*	*23*	*54*	—
20– ..	77	4	16	3	53	3	40	4	40	2	55	3	35	2	61	2
25– ..	78	6	14	2	52	5	40	3	39	3	56	2	33	2	63	2
30– ..	78	6	15	1	55	7	36	2	43	5	51	1	35	3	61	1
35– ..	78	5	16	1	60	8	31	1	49	6	44	1	43	4	52	1
40– ..	79	4	16	1	70	7	23	*0*	57	6	36	1	52	4	44	*0*
45 and over	78	*4*	18	*0*	78	*6*	16	—	69	*5*	26	*0*	58	*2*	40	*0*
Not stated..	64	4	25	7	40	*4*	52	*4*	38	*4*	56	*2*	32	*2*	65	*1*

Age Group	4				5 and over				Total			
	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other	N.H.S. Hospital	Non-N.H.S. Hospital	At Home	Other
All Ages ..	36	2	61	1	39	1	59	1	59	5	34	2
Under 20 ..	—	—	*100*	—	*100*	—	—	—	73	3	20	4
20– ..	35	*1*	62	*2*	35	*1*	64	—	66	4	27	3
25– ..	32	1	66	1	33	1	65	1	57	5	36	2
30– ..	33	2	64	1	36	1	62	1	53	5	41	1
35– ..	39	2	59	0	40	1	59	0	53	5	41	1
40– ..	47	2	51	*0*	46	1	53	0	58	4	38	0
45 and over	53	*3*	44	—	54	*1*	44	*1*	62	3	35	0
Not stated..	28	2	70	—	*22*	*3*	73	*2*	50	4	41	5

* "Parity" in this instance means the number of previous liveborn children.

TETANUS

Statistical Classification

Deaths from tetanus are assigned to I.S.C. No. 061 except when the tetanus has arisen following an injury that is more than very slight, e.g., a scratch; a death in these circumstances would be assigned to the injury. A further exception is that deaths from tetanus resulting from complications of pregnancy, childbirth, or the puerperium are assigned to maternal causes and not to I.S.C. No. 061.

Deaths actually assigned to tetanus (No. 061) in 1954 numbered 37, of which 28 were of males and 9 of females. Numbers of assigned deaths each year since 1940 are shown in the table that follows:

Year	M.	F.	Year	M.	F.
1940 ..	91	18	1948 ..	48	21
1941 ..	79	20	1949 ..	61	18
1942 ..	66	29	1950 ..	61	10
1943 ..	61	24	1951 ..	59	22
1944 ..	55	33	1952 ..	42	21
1945 ..	55	24	1953 ..	37	24
1946 ..	41	22	1954 ..	28	9
1947 ..	49	22			

No change of substance was made when the Sixth Revision of the Classification was introduced and it is unlikely that the temporary rise in numbers of deaths of males in 1949-51 was in any way a consequence of the revision. Apart from this irregularity the trend of mortality amongst males since 1940 has been fairly steadily downwards, the 28 deaths in 1954 contrasting with 91 in 1940 and 79 as the annual average for 1936-40. In contrast, there has been no parallel downward trend of deaths of females, though the total of 9 deaths in 1954 is the lowest so far recorded.

The distribution by sex and age of the 37 assigned deaths in 1954 was:—

	All ages	0–	1–	5–	15–	45–	65 and over
M.	28	2	4	9	3	8	2
F.	9	—	—	1	2	4	2

Of the two deaths in the first year one occurred in the second week of life and the other at four weeks.

As mentioned above, the system of classification at present in use leads to the assignment to other causes of a number of deaths due to tetanus, and a special examination was carried out in 1954 of all certificates mentioning tetanus to determine the circumstances of those deaths (so far as information available on the certificate allowed) and the extent to which some were being lost from the statistics by assignment elsewhere. Sixty-one certificates were traced, in 37 of which assignment was to tetanus and in 24 to other causes. There was one further certificate on which tetanus was mentioned as having occurred 40 years before but was not indicated as having contributed directly to death; this certificate has not been further considered. Details of the 61 deaths due to tetanus are given in Table L (page 109), the first part of the table

showing those assigned, and the second part those not assigned, to tetanus. A scrutiny of the causes of the tetanus suggests that there was little difference on the whole between the two series, and that the existing international procedure, whereby they are assigned in different ways, has resulted simply in reducing the apparent annual total of deaths from tetanus by 39 per cent with probably little statistical advantage to the causes to which these 39 per cent have been assigned.

Regional Distribution

The 61 deaths are shown in the following table according to region and urban or rural type of area of residence. The crude death rate in urban areas was 1·1 per million compared with 2·3 per million in rural areas. Although the rates have fallen the relative difference between town and country remains the same as in 1940-49, when rates in rural districts (assigned cases only) were 5·8 (males) and 1·8 (females) compared with national rates of 2·9 and 1·0 respectively. (See the 1948-49 Medical Text, page 86).

Regional and Urban/Rural Distribution of deaths from tetanus, 1954

Region	Assigned		Not assigned		Total	
	Urban areas	Rural Districts	Urban areas	Rural Districts	Urban areas	Rural Districts
Northern	2	—	1	—	3	—
East and West Ridings ..	—	—	2	2	2	2
North Midland	3	4	—	—	3	4
Eastern	2	2	1	2	3	4
London and South Eastern	5	2	6	—	11	2
Southern	3	1	3	—	6	1
South Western	2	2	1	1	3	3
Wales (including Monmouthshire) ..	1	1	—	—	1	1
Midland	2	1	1	1	3	2
North Western	4	—	2	1	6	1
England and Wales ..	24	13	17	7	41	20

Table L.—Deaths due to Tetanus by sex and age showing cause of tetanus. England and Wales, 1954.

(*a*) assigned to tetanus (I.S.C. No. 061)

Age	Sex	Cause of tetanus
1 week ..	M	Tetanus neonatorum
28 days ..	M	Tetanus entered cut umbilical cord at birth.
2 years ..	M	Delayed tetanus, cause unknown.
2 ,, ..	M	Wound of entry not found.
3 ,, ..	M	Portal of entry not demonstrated.
3 ,, ..	M	Tetanus*.
6 ,, ..	F	Puncture wound in leg from splinter off a park bench.
7 ,, ..	M	Grazed knee from a fall in school playground.
7 ,, ..	M	Associated with acute otitis media.
7 ,, ..	M	Tetanus.*
9 ,, ..	M	Splinter wound in hand.
9 ,, ..	M	Laceration of knee caused in a bicycle collision.
11 ,, ..	M	Tetanus.*
12 ,, ..	M	Puncture wound by a splinter in fall from tree.
12 ,, ..	M	No definite portal of entry was discovered.

* No cause stated.

Table L. (*a*) **assigned to tetanus (I.S.C.) No. 061**—*continued.*

Age	Sex	Cause of tetanus
12 „ ..	M	No evidence of origin : in habit of scratching heel-skin broken.
16 „ ..	M	Sprained ankle, developing osteomyelitis.
22 „ ..	F	Tetanus poisoning, cause unknown.
26 „ ..	M	Tetanus.*
39 „ ..	M	Associated with frost bite.
41 „ ..	F	Splinter of wood penetrated ankle.
47 „ ..	F	Laceration of hand by firework.
49 „ ..	M	Injury to hand caused by a grindstone.
51 „ ..	M	Tetanic infection of thumb.
51 „ ..	F	Infected wound of leg from a fall.
52 „ ..	M	Tetanus.*
53 „ ..	M	Blister infected by fish manure.
55 „ ..	M	Not sufficient evidence of source of entry.
56 „ ..	M	Tetanus.*
56 „ ..	F	Tetanus.*
58 „ ..	M	Tetanus.*
62 „ ..	F	Splinter in forearm.
64 „ ..	M	Tetanus.*
71 „ ..	F	Tetanus.*
72 „ ..	M	Abrasions and injuries sustained in fall from pedal cycle.
76 „ ..	F	Grazed chin from fall.
83 „ ..	M	Tetanus spasms associated with chronic bronchitis.

* No cause stated.

Table L.—*continued* (*b*) **assigned elswhere**

Age	Sex	Cause of tetanus
9 weeks	M	Abrasion of skin on removal of plaster strapping for fracture of humerus.
4 years ..	F	Wound from garden fork.
5 „ ..	M	Abrasion of ear.
6 „ ..	M	Rusty iron spike penetrated foot.
7 „ ..	M	Injury to eyebrow due to fall.
7 „ ..	M	Injury to hand due to a fall from wall.
9 „ ..	F	Lacerated knees from a fall.
10 „ ..	F	Cut knee from a fall on concrete floor.
14 „ ..	M	Explosion wounds of abdomen, thigh and hand from chemical experiment.
15 „ ..	M	Stone fell and lacerated finger.
16 „ ..	M	Operation to correct deformity of foot.
27 „ ..	F	Burns of leg during an epileptic seizure.
43 „ ..	M	Infection of ingrowing toenail.
47 „ ..	M	Compound fractures of fingers due to being crushed under piston of suction pump.
50 „ ..	F	Operation of hysterectomy for fibroids.
52 „ ..	M	Injury to finger from sickle.
54 „ ..	M	Probably following ulcerated foot.
54 „ ..	M	Wounds to hand and face from fall.
56 „ ..	M	Operation, gastrectomy for duodenal ulcer.
57 „ ..	M	Triple arthrodesis operation to correct deformity of foot.
59 „ ..	M	Cut thumb.
65 „ ..	M	Wound on finger from a bagging hook.
66 „ ..	M	Brick dropped on finger.
83 „ ..	M	Infected epithelioma of scalp.

TUBERCULOSIS

Deaths from tuberculosis (all forms) in 1954 numbered 7,897 compared with 24,163 in 1944 and 60,205 in 1904, corresponding crude rates per 100,000 being 18, 57 and 178.

The trend of mortality from tuberculosis during the 100 years or so prior to 1948, though showing nothing of the very rapid decline of several of the infectious diseases such as typhoid and scarlet fever, had on the whole been steadily downwards, with interruptions during the two world wars. Altogether, during these 100 years, the death rate from tuberculosis declined by 87 per cent. From 1948 this downward trend underwent rapid acceleration, producing by 1954 a further decline of some 65 per cent. Thus a long downward mortality gradient of about 1 per cent per annum has been suddenly replaced by one of about 10 per cent per annum and tuberculosis now takes its place amongst the infectious diseases whose mortality has undergone a revolution under the impact of antibiotics and chemotherapy.

During the first few years of this recent mortality decline some anxiety was felt over the failure of notification figures to show any corresponding reduction, the totals in 1948 and 1949 being 52,576 and 52,041 compared with 50,689 in 1938. More intensive case-finding could account for some at least of this continuingly high total of notifications but fears were being expressed that declining mortality was resulting in greater risks of tuberculosis infection for the population in general The more recent trend of notifications, however, suggests that the incidence of new cases is now beginning to diminish at a rate approaching that of deaths. In 1952 total notifications numbered 48,093, in 1953 46,546 and in 1954 42,348. The reduction between 1953 and 1954 was 9 per cent, compared with 11 per cent for deaths.

The figure of 42,348 notifications in 1954 is based on annual returns submitted by health authorities to the Ministry of Health, and corresponds with those for previous years. From the beginning of 1954 Medical Officers of Health began also to include weekly and quarterly tuberculosis returns to the General Register Office for tabulation and publication in the same way as for other notifiable diseases. Owing to the differences in the way in which the figures were reported the total notifications for 1954 recorded by the General Register Office differed from those of the Ministry of Health and numbered 44,041. Details are given in Tables 29, 32 and 33 of Part I. It is hoped to bring the two series into closer agreement in future years.

Respiratory tuberculosis—mortality

Of the total of 7,897 deaths in 1954, 7,069 were from tuberculosis of the respiratory system. Two thirds of these respiratory deaths were of males, but at adolescent and young adult ages deaths of females exceeded those of males. The decline in mortality of females has been faster than of males, the female comparative mortality index in 1954 being 0.23 compared with 0.36 for males.

Recent trends of mortality by sex and age are shown in Table LI (page 115). During the period of rapidly declining mortality since 1948 it has been the experience of each sex that rates have fallen more rapidly in childhood and young adult life than at older ages. However, even at the most advanced ages.

and in particular amongst males whose rates were previously rising, a change has become discernible in the last two years or so, and their rates have now commenced to fall. Associated with the different changes in the rates at different ages there has been in recent years considerable change in the age of maximum mortality in each sex. Amongst males the peak age has been gradually advancing upwards over the course of the past 80 years and by 1931-35 was in the age-group 45-54. In 1941-45 it had moved forward to 55-64, and in 1952 to 65-74. In contrast with males the age of maximum mortality amongst women showed no long-term advance but remained within the young adult period. In 1931-35 and right up until 1949 the peak age for women was 20-24. Since then it has moved upwards rapidly, so that in 1954 almost equal death rates of women were recorded at 25-34, 35-44 and 65-74.

It has been suggested from time to time and on reasonable grounds that the long-term age-shift of mortality amongst males is consistent with a conception of tuberculosis mortality patterning itself according to birth cohorts rather than calendar years, though why female mortality rates have not behaved similarly has never been properly understood. As a result of the accelerated age-shift that has recently set in, it will probably not be possible, in the future, to discern so suggestive a cohort mortality pattern in the male statistics as there has been hitherto.

Geographical and urban-rural variations

In each sex the highest death rates from respiratory tuberculosis in 1954 were recorded in the conurbations, particularly Tyneside, Merseyside and West Midlands, and in all areas of Wales (Table LII, page 116). A notably high rate was recorded in Greater London for men aged 65 and over. Rates were generally lower in the southern than in the northern regions, and outside the conurbations there was, for the country as a whole and the three English regional groups, a uniform gradient of mortality downwards from the large towns to the rural districts.

International statistics

Table LX (page 123) compares death rates in a number of countries in 1901, 1921, 1939 and 1950 to 1953. Each of the countries for which figures are included shows a more or less sizable decline in mortality during the latest period compared with 1939. Among the three constituent areas of the United Kingdom the rate for Northern Ireland in 1921 and 1939 exceeded those for England and Wales and for Scotland. Improvement has been roughly, but not quite, equal in the three areas. The rates for the Irish Republic have been higher than for Northern Ireland but are declining rapidly. Within Europe the two countries with lowest rates in 1953 were Netherlands and Denmark, both with rates less than half those of the countries comprising the United Kingdom.

Respiratory tuberculosis—notifications

Annual notification rates by sex and age since 1938 are given in Table LIII (page 118). The decline in notifications at all ages during the last few years represents a reassuring departure from the uniformly high rates recorded up to 1949, and it is a notable fact that for each individual age-group the notification rate in 1954 was lower than in the preceding year. In childhood, however, the rates were still double those recorded (albeit with different standards of case-finding) in 1938, and amongst men aged 65 and over the rate in 1953 was the highest, and in 1954 the second highest, yet recorded.

Although the notification rate of males at all ages in 1954 was half as high again as that of females there were no great differences between the sexes up to age 35 apart from the usual female excess at 15-24. Thereafter a male excess of notifications became very prominent.

The age-distribution of notifications in each sex contrasts markedly with that of deaths. Amongst males the peak age of notifications has consistently been 15-24, but with rates at this age not much greater than those at ages up to 65. Amongst females the 15-24 age-group is likewise the age of maximum notification, but with rates considerably higher than those at other ages.

With minor irregularities this national sex-age distribution of notifications was repeated in each of the regions (Table LIV, page 119). As with mortality, notification rates in 1954 were high in the North of England, Wales, and in the Midland and London and South Eastern regions. In the London and South Eastern region the rate was particularly high for males aged 65 and over.

For the country as a whole the ratio of deaths to notifications (Table LV, page 120) was low in each sex up to age 45; there was one death to every three notifications at ages 45-64, and about four deaths to every five notifications at higher ages. With numerous minor irregularities these ratios were repeated in each region. As the deaths and notifications do not necessarily relate to the same individuals and as death rates and notification rates are both changing, the ratio of deaths to notifications does no more than provide the very roughest estimate of the case fatality of respiratory tuberculosis. For accurate measurement of fatality a system whereby deaths and notifications could be linked in respect of individuals would be necessary, but does not exist in any organised large-scale way at the present time.

Non-respiratory tuberculosis—mortality

The death rates from non-respiratory tuberculosis in general have declined as rapidly in recent years as those from respiratory tuberculosis, and for some forms of the disease the improvement has been even greater. For example, the comparative mortality indices for tuberculosis of meninges and central nervous system (Table LVII, page 121) indicate a rate for 1954 that was 90 per cent less than in 1938, the reduction taking place wholly since 1946 and accelerating in the last two or three years. With tuberculosis of intestines and peritoneum improvement has been almost as great, and mortality from bone and joint tuberculosis is also declining rapidly.

Table LVIII (page 122) gives death rates by sex and age since 1931 for tuberculosis of meninges and for other non-respiratory tuberculosis. Mortality from tuberculous meningitis has always been highest in early childhood compared with later ages, and still remains so. The rates for each of the three childhood age-groups were, in 1954, in the vicinity of five per cent of the rates in 1931-35.

Other forms of non-respiratory tuberculosis, taken together, formerly had their highest mortality in the 0-4 age-group and had a lower but fairly uniform level of mortality in all higher age-groups. Recent reductions in mortality have been greatest in childhood and the result has been the transfer of maximum mortality right up to ages 55 and over.

The urban-rural and geographical distribution of death rates from the two groups of non-respiratory tuberculosis in 1954 is given in Table LIX (page 123). Annual numbers of deaths from these causes are now so low that no conclusions can be drawn about differences from place to place in the levels of mortality. The sex and age pattern of the rates for England and Wales as a whole is reproduced with no exceptional variations in each of the geographical and population aggregates.

Non-respiratory tuberculosis—notifications

In contrast with notifications of respiratory tuberculosis—where, as mentioned previously, a decline has taken place only in the last two or three years—the notification rates for non-respiratory tuberculosis have been improving steadily for some considerable time. As Table LVI (page 120) indicates, improvement has taken place in each sex and at all ages, but has been greatest in childhood. A male excess over female at ages under 15 has now disappeared, but a female excess at ages from 15 to 45 still continues.

Mass Miniature Radiography Statistics

The examination of large numbers of individuals for the presence of respiratory tuberculosis and other diseases of the chest was introduced in this country in 1943, and brief statistical accounts of numbers of persons examined and numbers with abnormal findings have been published annually in the Annual Report of the Chief Medical Officer of the Ministry of Health. During the first few years of the scheme fairly simple arrangements were sufficient to provide the amount of statistical information required. However, the proportion of persons X-rayed who had been examined on previous occasions has increased year by year and the X-ray units have been devoting an increasing amount of attention to the examination not only of probably healthy persons, but also of groups of persons at special risk of tuberculous contact and of patients with symptoms referred by their doctors. The need for more complex statistical analysis of the records was therefore becoming felt. Moreover, it seemed desirable that the records should also be more thoroughly analysed in respect of occupations and areas of residence and by a more detailed classification of diseases.

Following discussions with the Ministry of Health, with Directors of M.M.R. Units and with the Medical Research Council Mass Miniature Radiography Sub-committee, arrangements were made for a small number of units (seven in the first instance, increased afterwards to eight) to submit their records to the General Register Office for statistical analysis. This trial period lasted from July, 1953, to June, 1954. The arrangements having been found to be satisfactory, both in the units and in the General Register Office, all the M.M.R. Units in England and Wales (numbering at that time about 70) were brought into the scheme from the beginning of July, 1954, or shortly after.

The working procedure adopted has been that each unit submits a monthly anonymous return, comparable with the return previously submitted to the Ministry of Health (Schedule B) for all persons found to have some significant abnormality, and also submits a 1 in 10 sample of the record cards of all the persons examined during the month, whether found to be normal or abnormal. Machine cards are immediately prepared from these and the record cards returned to the units.

In classifying cases of tuberculosis discovered, a new classification has been adopted under four headings:

A. Extent of the lesion
B. Special characters of the lesion, e.g. with cavitation
C. Tubercle bacilli
D. Assessment by the end of 6 months

A detailed classification for non-tuberculous conditions is also being used.

It is intended to tabulate the statistics according to sex, age, history, category of persons examined (persons in factories, general practitioner referrals, etc.), occupation, area of residence, first or subsequent X-ray and type of lesion.

To illustrate the type of information that has been derived from the first six months operation of the full scheme, from July to December, 1954, Table LXII (page 128) gives the numbers of examinations and numbers of persons found to have tuberculosis requiring treatment or close clinic supervision, by age and category of persons examined. Table LXI (page 124) gives some of the results, by sex and age, among the residents of a selected series of large towns.

Table LI.—Tuberculosis of respiratory system: Death rates per million living by sex and age, 1931 to 1954

	0–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and over
Males											
1931–35	85	42	64	490	963	961	1,140	1,368	1,176	723	275
1936–40	61	20	44	366	742	785	937	1,210	1,216	718	296
1941–45	76	24	34	339	581	674	811	1,114	1,203	741	295
1946	68	22	23	239	481	615	687	1,020	1,165	768	340
1947	77	15	29	241	500	632	679	1,034	1,213	812	267
1948	56	*10*	14	211	445	603	633	961	1,166	881	334
1949	33	*6*	*13*	127	368	496	591	869	1,153	927	380
1949*	34	*7*	14	127	366	497	592	869	1,159	937	400
1950*	38	*9*	*8*	78	229	395	428	751	1,024	891	411
1951*	30	*7*	*7*	46	171	292	364	636	978	953	464
1952*	15	*4*	*10*	35	102	201	287	503	829	843	447
1953*	14	*4*	*3*	18	71	156	214	413	712	814	445
1954*	*9*	*2*	*1*	*13*	55	130	192	370	643	778	406
Females											
1931–35	74	43	143	840	1,138	911	646	475	394	306	170
1936–40	55	24	98	658	1,016	759	511	377	339	272	160
1941–45	72	24	76	591	916	692	427	304	269	220	123
1946	60	25	69	468	842	662	382	261	242	207	119
1947	70	24	63	502	899	730	411	267	249	224	133
1948	52	19	53	462	812	702	367	255	235	218	105
1949	33	*9*	30	349	684	622	348	253	245	229	127
1949*	33	*10*	30	351	682	622	348	254	249	236	139
1950*	29	*8*	15	199	429	444	273	229	212	212	144
1951*	25	*8*	*14*	108	278	347	238	192	180	198	135
1952*	18	*5*	*6*	58	169	230	166	131	148	150	159
1953*	17	*5*	*3*	32	122	174	146	116	130	162	140
1954*	*11*	*2*	*3*	31	84	143	145	104	107	137	117

*According to the 6th (1948) Revision of the International List. Throughout the rest of the table rates are according to the 5th (1938) Revision.

Table LII.—Tuberculosis of respiratory system ; Death rates per million living by sex and age and notifications per 100 deaths in Standard Regions and aggregates summary (by type of area) within Regional Groups, 1954

Area	Males							Females							Persons	
	0–	5–	15–	25–	45–	65 and over	All ages	0–	5–	15–	25–	45–	65 and over	All ages	All ages	Notifications per hundred deaths
ENGLAND AND WALES	9	*1*	35	160	481	659	232	*11*	*3*	58	144	105	130	92	160	523
Aggregates summary (by type of area)																
Conurbations	*5*	*2*	51	147	540	843	261	*10*	*3*	59	144	106	151	96	174	
Areas outside conurbations:																
Urban areas with populations of 100,000 and over	*17*	—	*32*	199	581	738	274	*5*	—	63	195	145	150	119	193	
Urban areas with populations of 50,000 and under 100,000	*15*	—	*34*	151	500	633	233	*8*	—	92	149	108	107	95	161	
Urban areas with populations under 50,000	*5*	—	*25*	171	438	569	219	*14*	*6*	47	146	97	104	86	150	
Rural Districts	*12*	*3*	*23*	152	336	430	167	*16*	*2*	50	103	84	117	72	120	
NORTH OF ENGLAND																
Regions:																
Northern	—	—	*62*	192	542	553	241	*23*	—	*83*	254	110	151	128	183	555
East and West Ridings	*6*	—	*39*	187	506	656	249	*20*	*7*	*57*	150	105	116	93	168	451
North Western	*16*	*2*	54	208	565	659	271	*12*	—	85	188	123	115	110	187	443
Conurbations:																
Tyneside	—	—	*102*	202	865	750	347	—	—	*103*	296	*120*	*245*	156	247	
West Yorkshire	—	—	*48*	127	462	627	225	*16*	—	*29*	127	81	*107*	76	146	
South East Lancashire	—	*6*	*72*	186	564	812	282	—	—	*101*	147	120	147	104	188	
Merseyside	*16*	—	*92*	299	757	961	346	*33*	—	*146*	294	140	*118*	150	242	
Areas outside conurbutions:																
Urban areas with populations of 100,000 and over	*14*	—	*21*	279	622	685	303	*15*	—	*43*	248	160	*145*	134	214	
Urban areas with populations of 50,000 and under 100,000	—	—	*66*	171	502	707	253	*24*	—	*112*	187	*108*	*69*	104	175	
Urban areas with populations under 50.000	*9*	—	*32*	176	448	450	212	*38*	*5*	*56*	181	106	*89*	99	153	
Rural Districts	*28*	—	*34*	179	386	375	181	—	*7*	*54*	146	96	*122*	87	135	

Table LII.—*continued.*

Area	Males							Females							Persons	
	0–	5–	15–	25–	45–	65 and over	All ages	0–	5–	15–	25–	45–	65 and over	All ages	All ages	Notifications per hundred deaths
MIDLANDS AND EASTERN REGIONS																
Regions:																
North Midland	*22*	—	*47*	163	445	588	218	*8*	*4*	96	159	110	97	97	157	464
Midland	*6*	*8*	*42*	172	686	689	276	—	*6*	*58*	115	140	122	89	181	516
Eastern	—	—	*9*	105	241	345	124	—	—	*30*	86	*43*	123	55	89	667
Conurbation:																
West Midlands	*11*	*11*	*78*	209	783	733	318	—	*11*	*73*	135	153	163	105	208	
Areas outside conurbation:																
Urban areas with populations of 100,000 and over	*25*	—	*37*	164	548	770	258	—	—	*78*	157	138	156	108	180	
Urban areas with populations of 50,000 and under 100,000	—	—	*14*	*115*	517	702	220	—	—	*110*	*115*	*79*	*100*	78	148	
Urban areas with populations under 50,000	—	—	*13*	138	407	468	188	*10*	*5*	*34*	127	82	*84*	72	128	
Rural Districts	*8*	*4*	*28*	120	276	340	136	—	—	*48*	78	66	*91*	55	96	
GREATER LONDON	*3*	—	*23*	95	424	919	223	*11*	*4*	*28*	111	89	155	81	147	
SOUTH OF ENGLAND																630
Regions:																
Remainder of South East	*21*	*5*	*19*	127	391	558	200	*33*	*5*	*25*	97	103	115	77	134	
Southern	—	—	*13*	122	363	507	167	*10*	—	*47*	93	95	107	71	118	610
South Western	*9*	—	*23*	164	429	532	208	—	*5*	*49*	147	95	108	86	145	489
Urban areas with populations of 100,000 and over	—	—	*29*	164	511	625	234	—	—	*74*	152	123	126	100	164	
Urban areas with populations of 50,000 and under 100,000	*51*	—	*14*	165	461	505	218	—	—	*58*	129	126	*123*	94	152	
Urban areas with populations under 50,000	—	—	*23*	137	413	568	204	—	*10*	*28*	114	91	109	76	136	
Rural Districts	*9*	*4*	*12*	118	295	466	151	*38*	—	*29*	85	78	96	62	107	
WALES (including Monmouthshire)	*19*	—	*44*	292	613	961	339	*10*	—	*89*	208	150	232	136	235	425
Regions:																
Wales I (South East)	*13*	—	*54*	259	618	954	329	*14*	—	*90*	222	163	215	141	233	
Wales II (Remainder)	*36*	—	*20*	381	598	976	365	—	—	*87*	*172*	*120*	*263*	125	241	
Urban areas with populations of 100,000 and over	*39*	—	*55*	*181*	735	1,078	343	—	—	*47*	276	*184*	*215*	155	246	
Urban area with population of 50,000 and under 100,000	—	—	*323*	*241*	*800*	*606*	*377*	—	—	—	*471*	*250*	*556*	*262*	*318*	
Urban areas with populations under 50,000	*22*	—	*45*	326	546	1,089	347	—	—	*95*	181	*127*	*177*	116	228	
Rural Districts	—	—	*18*	336	594	756	321	*36*	—	*126*	*169*	*150*	*299*	141	231	

Table LIII.—Tuberculosis of respiratory system; Notification rates per 100,000 living by sex and age, 1938 to 1954

	All ages	0–	5–	15–	25–	35–	45–	65 and over
Males								
1938 ..	108	20	42	141	137	136	136	52
1939 ..	98	17	32	132	124	124	125	46
1940 ..	104	17	29	145	146	128	123	43
1941 ..	115	20	33	154	155	148	141	50
1942 ..	117	22	38	165	148	153	142	49
1943 ..	119	27	40	166	144	154	152	50
1944 ..	122	30	41	180	158	142	149	56
1945 ..	118	32	40	178	160	135	142	53
1946 ..	119	32	46	179	174	125	138	54
1947 ..	118	40	53	193	163	116	137	56
1948 ..	117	44	51	215	161	117	139	64
1949 ..	119	46	49	180	159	122	146	68
1950 ..	111	53	49	159	154	107	135	67
1951 ..	115	53	48	170	156	117	141	72
1952 ..	112	52	51	165	147	116	135	77
1953 ..	110	49	49	155	133	114	139	85
1954 ..	100	41	40	143	125	106	126	82
Females								
1938 ..	77	18	42	175	129	72	42	19
1939 ..	71	15	33	166	116	68	37	18
1940 ..	70	17	30	168	120	66	35	16
1941 ..	76	19	33	185	126	69	41	19
1942 ..	78	20	34	204	130	70	37	18
1943 ..	83	26	40	209	142	73	40	18
1944 ..	86	26	40	227	150	75	38	16
1945 ..	81	26	41	223	140	69	34	16
1946 ..	80	28	49	213	141	65	35	16
1947 ..	83	33	51	235	146	66	35	17
1948 ..	86	46	58	244	151	68	35	17
1949 ..	85	44	53	238	155	71	35	17
1950 ..	82	43	52	238	152	69	31	16
1951 ..	81	50	52	229	149	68	33	16
1952 ..	80	49	53	216	148	71	35	16
1953 ..	77	45	52	201	141	73	34	18
1954 ..	68	37	44	187	124	63	30	17

Table LIV.—Tuberculosis of respiratory system: Notification rates per 100,000 living by sex and age in Standard Regions, 1954

Area	Males							Females							Persons
	0–	5–	15–	25–	45–	65 and over	All ages	0–	5–	15–	25–	45–	65 and over	All ages	All ages
England and Wales	**41**	**40**	**143**	**116**	**126**	**82**	**100**	**37**	**44**	**187**	**94**	**30**	**17**	**68**	**84**
Standard Regions:															
Northern	52	57	179	124	144	70	114	35	58	261	120	33	17	90	102
East and West Ridings ..	49	35	115	106	128	74	93	46	41	158	80	23	16	59	76
North Western	40	44	139	110	130	80	99	38	50	199	93	27	11	68	83
North Midland	34	47	133	92	100	64	85	46	45	174	76	27	12	61	73
Midland	64	52	173	125	144	76	114	56	50	194	91	35	15	73	93
Eastern	21	26	102	89	83	44	70	19	32	128	74	22	16	49	59
London and South Eastern	40	32	169	132	139	116	114	36	36	191	100	35	22	71	91
Southern	20	29	96	116	122	65	88	22	31	138	90	30	15	57	72
South Western	31	37	107	99	101	67	82	28	49	169	88	25	16	61	71
Wales (including Monmouthshire) ..	49	48	193	130	124	98	114	35	57	228	131	32	27	87	100

Table LV.—Tuberculosis of respiratory system: Ratio of deaths per 100 notifications by sex and age, and equivalent average notification rates for persons aged 15-44, in Standard Regions, 1954

Area	E.A.N.R. 15–44	Ratio of deaths per 100 notifications							
		Males				Females			
		15–	25–	45–	65 and over	15–	25–	45–	65 and over
England and Wales	**125**	**2**	**14**	**38**	**80**	**3**	**15**	**35**	**77**
Standard Regions:									
Northern	155	3	16	38	80	3	21	33	90
East and West Ridings	108	3	18	40	89	4	19	45	74
North Western	124	4	19	43	82	4	20	46	100
North Midland ..	107	4	18	44	91	5	21	41	78
Midland	133	2	14	48	91	3	13	40	82
Eastern	93	1	12	29	78	2	12	20	78
London and South Eastern	138	1	8	30	70	1	11	27	66
Southern	107	1	11	30	78	3	10	31	73
South Western	107	2	17	43	80	3	17	38	67
Wales (including Monmouthshire) ..	157	2	22	49	98	4	16	46	86

Table LVI.—Tuberculosis, non-respiratory: Notification rates per million living by sex and age, 1938 to 1954

	Males					Females				
	All ages	0–	15–	25–	45 and over	All ages	0–	15–	25–	45 and over
1938-40	290	744	341	151	72	264	641	403	172	61
1941-45	269	698	326	148	64	261	632	413	178	63
1946	217	569	250	123	53	210	518	334	149	47
1947	202	518	227	114	54	196	455	317	144	51
1948	197	505	243	99	53	199	473	333	138	46
1949	171	423	211	93	50	174	399	304	127	40
1950	151	350	186	93	48	164	343	288	139	39
1951	149	327	196	98	48	159	314	300	131	46
1952	135	275	196	91	50	146	272	242	135	54
1953	122	233	163	85	59	133	224	240	129	51
1954	109	192	149	93	48	133	199	245	140	56

Table LVII.—Tuberculosis: Comparative Mortality Indices for various sites, 1931 to 1954

	All forms		Respiratory		Meninges and C.N.S.		Intestines, peritoneum, etc.		Bones and joints		Other forms	
	M.	**F.**	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1931	**1·39**	**1·47**	1·38	1·47	1·44	1·39	1·75	1·91	1·53	1·72	1·24	1·23
1932	**1·30**	**1·38**	1·27	1·36	1·38	1·28	1·78	1·65	1·45	1·88	1·28	1·34
1933	**1·29**	**1·34**	1·29	1·35	1·21	1·18	1·50	1·72	1·46	1·52	1·19	1·10
1934	**1·20**	**1·24**	1·19	1·24	1·22	1·22	1·34	1·45	1·41	1·56	1·07	1·12
1935	**1·13**	**1·16**	1·13	1·18	1·10	1·01	1·23	1·31	1·29	1·39	0·97	0·98
1936	**1·09**	**1·10**	1·09	1·11	1·06	1·00	1·08	1·23	1·21	1·33	1·02	0·95
1937	**1·08**	**1·12**	1·08	1·12	1·04	1·02	1·19	1·09	1·12	1·24	1·04	1·12
1938	**1·00**	**1·00**	1·00	1·00	1·00	1·00	1·00	1·00	1·00	1·00	1·00	1·00
1939	**1·01**	**0·99**	1·02	1·00	0·92	0·93	0·96	0·92	1·05	1·14	0·98	0·93
1940	**1·18**	**1·08**	1·22	1·09	1·06	1·07	1·09	1·05	1·10	0·99	0·92	1·05
1941	**1·28**	**1·11**	1·36	1·09	1·42	1·37	1·27	1·00	1·03	1·11	1·32	1·12
1942	**1·19**	**0·99**	1·27	0·97	1·20	1·13	1·27	1·08	1·30	1·06	1·13	0·99
1943	**1·26**	**0·98**	1·33	0·96	1·13	1·14	1·02	0·96	1·22	0·99	1·14	0·98
1944	**1·21**	**0·92**	1·27	0·91	1·05	1·02	0·97	0·81	1·05	0·94	1·11	1·00
1945	**1·17**	**0·92**	1·23	0·91	1·01	1·04	0·93	0·71	1·01	0·81	1·08	0·92
1946	**0·94**	**0·86**	0·97	0·86	0·88	0·89	0·69	0·53	0·69	0·80	0·81	0·86
1947	**0·90**	**0·89**	0·93	0·92	0·81	0·81	0·56	0·62	0·58	0·66	0·83	0·86
1948	**0·83**	**0·82**	0·87	0·85	0·64	0·70	0·45	0·51	0·54	0·65	0·70	0·68
1949	**0·76**	**0·72**	0·80	0·77	0·55	0·56	0·39	0·37	0·39	0·48	0·64	0·49
1950	**0·62**	**0·55**	0·66	0·58	0·42	0·48	0·23	0·25	0·38	0·39	0·47	0·44
1951	**0·55**	**0·45**	0·58	0·46	0·43	0·46	0·21	0·24	0·29	0·35	0·43	0·39
1952	**0·44**	**0·31**	0·47	0·32	0·26	0·26	0·17	0·16	0·28	0·26	0·37	0·32
1953	**0·37**	**0·26**	0·39	0·27	0·18	0·18	0·15	0·14	0·17	0·26	0·31	0·31
1954	**0·33**	**0·22**	0·36	0·23	0·10	0·10	0·10	0·14	0·19	0·24	0·35	0·29

Table LVIII.—Tubercolosis of meninges and central nervous system, and other non-respiratory tuberculosis: Death rates per million living by sex and age, 1931-54

	Tuberculosis of meninges and central nervous system						Other non-respiratory tuberculosis					
	0–	5–	10–	15–	25–54 E.A.D.R.	55 and over	0–	5–	10–	15–	25–54 E.A.D.R.	55 and over
	Males						**Males**					
1931–35 ..	414	123	66	49	13	3	219	71	61	105	71	75
1936 ..	313	129	60	42	11	3	152	52	42	92	66	61
1937 ..	319	91	66	42	13	2	168	55	43	79	71	60
1938 ..	297	96	57	42	13	3	156	45	39	87	61	52
1939 ..	284	90	52	38	12	4	125	53	34	89	63	60
1940 ..	300	96	55	48	13	*3*	146	41	35	89	65	62
1941 ..	402	136	67	55	14	*4*	188	46	43	91	60	59
1942 ..	321	107	67	53	14	*2*	134	50	46	84	65	69
1943 ..	288	110	55	50	12	5	134	42	36	73	56	54
1944 ..	273	102	62	51	12	*2*	109	34	34	67	51	59
1945 ..	266	100	65	47	11	*2*	107	38	35	67	53	49
1946 ..	222	86	72	42	11	*3*	87	21	27	51	50	43
1947 ..	215	83	53	39	11	*4*	92	33	25	46	45	44
1948 ..	179	62	33	30	9	*4*	57	25	16	41	41	44
1949 ..	153	54	25	26	7	*4*	34	15	14	38	37	38
1950 ..	103	40	24	20	8	*4*	24	*8*	*12*	25	28	38
1951 ..	109	37	22	19	7	5	17	*5*	*6*	19	26	34
1952 ..	67	16	14	13	*5*	*4*	19	*1*	*6*	14	20	38
1953 ..	46	*10*	*8*	10	*3*	*2*	12	*3*	*6*	7	17	30
1954 ..	22	*4*	*5*	*4*	*3*	*1*	13	*3*	*2*	11	17	31
	Females						**Females**					
1931–35 ..	356	125	73	48	10	2	160	59	50	84	58	62
1936 ..	283	98	58	47	9	2	129	37	38	66	51	45
1937 ..	291	89	61	50	9	1	132	46	43	72	48	52
1938 ..	300	100	60	40	8	2	112	40	36	73	45	42
1939 ..	252	77	66	47	9	2	102	38	32	69	41	40
1940 ..	278	96	71	61	9	*2*	118	34	26	80	50	40
1941 ..	370	138	80	70	11	*2*	141	50	34	83	42	48
1942 ..	290	101	69	64	12	*1*	92	30	44	79	49	42
1943 ..	277	106	63	72	11	*3*	101	32	34	74	42	46
1944 ..	234	95	78	58	10	*4*	86	33	26	67	42	44
1945 ..	246	107	71	60	10	*2*	84	29	41	55	35	42
1946 ..	199	97	67	52	9	*2*	64	28	22	53	34	37
1947 ..	184	78	55	52	9	*2*	65	26	29	57	34	34
1948 ..	166	53	54	44	8	*3*	56	20	15	39	30	34
1949 ..	126	45	35	33	8	*2*	33	*10*	*7*	26	24	27
1950 ..	116	39	22	31	*5*	*3*	20	*9*	*5*	22	19	27
1951 ..	102	33	35	30	6	*1*	15	*4*	*6*	14	18	29
1952 ..	57	20	17	16	*4*	*1*	*10*	*4*	*4*	9	12	25
1953 ..	48	13	*6*	9	*3*	*1*	16	*2*	*1*	9	13	22
1954 ..	18	*6*	*3*	8	*2*	*1*	*4*	*3*	*5*	7	12	23

Rates have been adjusted to the 6th Revision of the International classification throughout.

Table LIX.—Tuberculosis of meninges and central nervous system and other non-respiratory tuberculosis: Death rates per million living in standard regions, 1954

	Tuberculous meningitis						Other non-respiratory tuberculosis					
	Males			Females			Males			Females		
	0–	5–	15 and over	0–	5–	15 and over	0–	5–	15 and over	0–	5–	15 and over
ENGLAND AND WALES	22	5	3	18	5	3	13	2	20	4	4	15
Aggregates summary (by type of area)..												
Conurbations	9	6	4	16	4	4	11	1	19	7	1	14
Areas outside conurbations :												
Urban areas with populations of 100,000 and over	39	7	3	23	2	5	21	—	18	—	7	10
Urban areas with populations of 50,000 and under 100,000 ..	15	—	2	8	8	4	8	4	24	8	—	19
Urban areas with populations under 50,000	30	4	1	26	7	2	8	5	21	3	6	15
Rural Districts	27	3	2	13	3	1	18	3	20	3	8	17
Regions :												
Northern	22	4	4	23	4	2	22	—	25	—	—	18
East and West Ridings ..	31	6	4	7	3	3	6	3	16	—	10	13
North Western	16	6	5	21	6	4	12	6	22	4	4	13
North Midland	22	4	2	38	8	3	15	4	17	8	—	19
Midland..	39	3	4	12	—	2	17	3	18	18	6	19
Eastern	24	—	2	8	—	2	8	—	16	—	8	11
London and South Eastern ..	18	6	1	11	4	2	5	1	19	3	1	12
Southern	19	—	—	20	5	—	—	—	21	—	10	17
South Western	9	9	1	46	5	6	52	—	21	9	—	14
Wales (including Monmouthshire)	19	5	3	10	15	4	10	5	28	—	5	21

Table LX.—Respiratory Tuberculosis: Death rates per 100,000 persons, all ages in selected countries—various years.

	1901	1921	1939	1950	1951	1952	1953
Union of South Africa	?	48	27	19	16	12	?
Canada	?	61	44	22	20	14	10
Chile	?	229	218	135	126	97	70
United States of America ..	169	85	43	21	18	15	11
Uruguay	?	122	89	55	49	?	?
Ceylon	?	?	55	49	46	35	27
Japan	139	147	154	122	91	82	55
Germany	193	115	53	33	31	23	19
Austria	?	213	81	46	46	39	?
Belgium	136	86	52	34	31	23	25
Denmark	?	72	28	12	12	10	8
Spain	153	125	99	83	?	?	?
Finland	290	212	168	79	73	50	40
France	?	153	?	48	51	37	31
Irish Republic	215	125	89	63	56	42	31
Iceland	?	125	49	15	19	?	5
Italy	111	97	58	33	35	22	20
Luxembourg	?	?	63	36	24	19	15
Norway	192	157	69	24	20	17	14
Netherlands	137	91	28	14	12	10	7
Portugal	?	115	118	119	109	78	50
England and Wales	126	88	52	32	28	21	18
Scotland	147	81	54	47	37	28	23
Northern Ireland	?	135	66	38	36	24	19
Sweden	?	131	65	19	21	15	13
Switzerland	189	122	62	28	29	20	18
Australia	?	58	35	19	17	14	10
New Zealand (excluding Maoris)	77	50	34	20	17	12	10

Table LXI.—Number of Examinations made by Mass Radiography Units during per 1,000 Examinations. England and Wales and Certain Areas according to

(Numbers of Examinations are based on a 10

Sex and Age		Total number of Examinations	TUBERCULOSIS															
			Requiring Treatment or Close Supervision								Healed, Suspect or Requiring Occasional Supervision							
			Notified		Not Notified		Case Known		Not Stated		Notified		Not Notified		Case Known		Not Stated	
			No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
ALL AREAS IN ENGLAND AND WALES*																		
Under 35	M	488,920	813	1·7	115	0·2	22	0·0	13	0·0	119	0·2	1,987	4·1	82	0·2	61	0·1
35 and over		374,050	878	2·3	133	0·4	27	0·1	21	0·1	170	0·5	6,040‡	16·1	132	0·4	127	0·3
Under 35	F	439,790	836	1·9	137	0·3	12	0·0	16	0·0	83	0·2	1,647	3·7	43	0·1	64	0·1
35 and over		244,800	273	1·1	53	0·2	14	0·1	3	0·0	68	0·3	3,260	13·3	64	0·3	119	0·5
LONDON ADMINISTRATIVE COUNTY†																		
Under 35	M	30,940	61	2·0	8	0·3	2	0·1	7	0·2	5	0·2	195	6·3	15	0·5	3	0·1
35 and over		24,270	105	4·3	11	0·5	1	0·0	9	0·4	10	0·4	585	24·1	22	0·9	7	0·3
Under 35	F	33,420	92	2·8	15	0·4	1	0·0	7	0·2	7	0·2	155	4·6	7	0·2	4	0·1
35 and over		18,290	20	1·1	6	0·3	1	0·1	2	0·1	2	0·1	335	18·3	7	0·4	3	0·2
BIRMINGHAM C.B.																		
Under 35	M	15,530	61	3·9	5	0·3	2	0·1	—	—	1	0·1	56	3·6	1	0·1	—	—
35 and over		13,190	63	4·8	7	0·5	—	—	—	—	3	0·2	127	9·6	2	0·2	—	—
Under 35	F	12,710	36	2·8	3	0·2	—	—	—	—	2	0·2	63	5·0	1	0·1	—	—
35 and over		6,000	19	3·2	3	0·5	—	—	—	—	—	—	53	8·8	1	0·2	—	—
LIVERPOOL C.B.																		
Under 35	M	17,920	67	3·7	4	0·2	—	—	2	0·1	22	1·2	99	5·5	—	—	9	0·5
35 and over		6,870	47	6·8	2	0·3	—	—	7	1·0	15	2·2	177	25·8	—	—	5	0·7
Under 35	F	16,150	50	3·1	2	0·1	—	—	4	0·2	9	0·6	61	3·8	—	—	12	0·7
35 and over		4,360	15	3·4	—	—	—	—	1	0·2	6	1·4	77	17·7	—	—	7	1·6
SHEFFIELD C.B.																		
Under 35	M	6,630	19	2·9	2	0·3	—	—	—	—	—	—	29	4·4	3	0·5	—	—
35 and over		7,150	26	3·6	6	0·8	—	—	—	—	3	0·4	71	9·9	14	2·0	—	—
Under 35	F	6,770	20	3·0	2	0·3	—	—	—	—	3	0·4	27	4·0	2	0·3	—	—
35 and over		3,320	4	1·2	1	0·3	—	—	—	—	2	0·6	34	10·2	2	0·6	—	—
STOKE ON TRENT C.B.																		
Under 35	M	5,690	15	2·6	2	0·4	—	—	—	—	—	—	11	1·9	—	—	—	—
35 and over		5,440	24	4·4	2	0·4	1	0·2	1	0·2	1	0·2	34	6·2	1	0·2	—	—
Under 35	F	6,890	17	2·5	8	1·2	2	0·3	1	0·1	1	0·1	18	2·6	1	0·1	—	—
35 and over		5,020	14	2·8	3	0·6	—	—	—	—	1	0·2	41	8·2	1	0·2	—	—
NEWCASTLE UPON TYNE C.B.																		
Under 35	M	6,210	22	3·5	2	0·3	—	—	—	—	2	0·3	44	7·1	1	0·2	—	—
35 and over		4,460	25	5·6	1	0·2	—	—	—	—	1	0·2	74	16·6	2	0·4	—	—
Under 35	F	5,980	31	5·2	1	0·2	—	—	—	—	2	0·3	43	7·2	1	0·2	—	—
35 and over		2,070	12	5·8	—	—	—	—	—	—	1	0·5	54	26·1	1	0·5	—	—

* No reports have been received from one Unit on examinations made during the period (29,590 examinations) and these have been deducted from the totals.

† No reports have been received from one Unit on examinations made during the period (10,760 examinations) and these have been deducted from the totals.

‡ Including one case for which the age was not stated.

July-December, 1954, distinguishing certain Abnormalities observed. Rates normal place of residence of person examined.

per cent sample of Record Cards).

Sex and Age		Bronchi-ectasis		Pneumo-coniosis		Pneumo-coniosis with Tuber-culosis		Intrathoracic Growths						Cardio-vascular Lesions		All other Non-Tuber-culous Conditions	
								Malig-nant		Benign		Not Stated					
		No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
ALL AREAS IN ENGLAND AND WALES*																	
Under 35	M	567	1·2	166	0·3	3	0·0	18	0·0	16	0·0	1	0·0	509	1·0	1,899	3·9
35 and over		748	2·0	4,063	10·9	112	0·3	544	1·5	126	0·3	33	0·1	2,157	5·8	3,413	9·1
Under 35	F	357	0·8	1	0·0	—	—	9	0·0	24	0·1	–	-	676	1·5	1,531	3·5
35 and over		317	1·3	135	0·6	7	0·0	81	0·3	147	0·6	10	0·0	2,498	10·2	2,104	8·6
LONDON ADMINISTRATIVE COUNTY †																	
Under 35	M	25	0·8	1	0·0	—	—	3	0·1	—	—	—	—	27	0·9	165	5·3
35 and over		61	2·5	15	0·6	3	0·1	53	2·2	7	0·3	4	0·2	118	4·9	450	18·5
Under 35	F	16	0·5	—	—	—	—	—	—	—	—	—	—	30	0·9	226	6·8
35 and over		24	1·3	—	—	—	—	13	0·7	2	0·1	—	—	167	9·1	293	16·0
BIRMINGHAM C.B.																	
Under 35	M	15	1·0	1	0·1	—	—	3	0·2	1	0·1	—	—	17	1·1	104	6·7
35 and over		17	1·3	25	1·9	3	0·2	49	3·7	2	0·2	2	0·2	97	7·4	173	13·1
Under 35	F	4	0·3	—	—	—	—	—	—	2	0·2	—	—	30	2·4	73	5·7
35 and over		5	0·8	1	0·2	—	—	10	1·7	2	0·3	—	—	65	10·8	47	7·8
LIVERPOOL C.B.																	
Under 35	M	67	3·7	—	—	—	—	—	—	1	0·1	—	—	46	2·6	200	11·2
35 and over		52	7·6	5	0·7	2	0·3	33	4·8	1	0·1	—	—	95	13·8	225	32·8
Under 35	F	34	2·1	—	—	—	—	1	0·1	2	0·1	—	—	118	7·3	169	10·5
35 and over		25	5·7	—	—	—	—	8	1·8	1	0·2	—	—	86	19·7	118	27·1
SHEFFIELD C.B.																	
Under 35	M	13	2·0	2	0·3	—	—	—	—	—	—	—	—	12	1·8	28	4·2
35 and over		21	2·9	101	14·1	—	—	21	2·9	—	—	—	—	109	15·2	107	15·0
Under 35	F	11	1·6	—	—	—	—	—	—	—	—	—	—	21	3·1	27	4·0
35 and over		11	3·3	1	0·3	—	—	2	0·6	—	—	—	—	97	29·2	38	11·4
STOKE ON TRENT C.B.																	
Under 35	M	4	0·7	14	2·5	1	0·2	—	—	—	—	—	—	12	2·1	8	1·4
35 and over		6	1·1	419	77·0	17	3·1	3	0·6	—	—	—	—	28	5·1	28	5·1
Under 35	F	3	0·4	—	—	—	—	—	—	—	—	—	—	9	1·3	10	1·5
35 and over		9	1·8	123	24·5	5	1·0	4	0·8	—	—	—	—	34	6·8	17	3·4
NEWCASTLE UPON TYNE C.B.																	
Under 35	M	4	0·6	—	—	—	—	—	—	—	—	—	—	5	0·8	29	4·7
35 and over		11	2·5	6	1·3	1	0·2	21	4·7	—	—	1	0·2	18	4·0	51	11·4
Under 35	F	2	0·3	—	—	—	—	—	—	—	—	—	—	9	1·5	17	2·8
35 and over		6	2·9	—	—	—	—	1	0·5	—	—	—	—	22	10·6	19	9·2

Table LXI.—*continued.*

Sex and Age		Total Number of Examinations	TUBERCULOSIS															
			Requiring Treatment or Close Supervision								Healed, Suspect or Requiring Occasional Supervision							
			Notified		Not Notified		Case Known		Not Stated		Notified		Not Notified		Case Known		Not Stated	
			No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
OXFORD C.B.																		
Under 35	M	4,510	10	2·2	—	—	—	—	—	—	—	—	12	2·7	—	—	—	—
35 and over		3,910	8	2·0	5	1·3	—	—	—	—	—	—	85	21·7	—	—	—	—
Under 35	F	5,340	16	3·0	1	0·2	—	—	—	—	—	—	11	2·1	—	—	—	—
35 and over		4,050	5	1·2	3	0·7	—	—	—	—	—	—	42	10·4	—	—	—	—
PORTSMOUTH C.B.																		
Under 35	M	4,370	13	3·0	—	—	1	0·2	—	—	—	—	17	3·9	2	0·5	—	—
35 and over		3,430	17	5·0	1	0·3	3	0·9	—	—	—	—	73	21·3	—	—	—	—
Under 35	F	6,590	15	2·3	4	0·6	—	—	—	—	—	—	26	3·9	2	0·3	—	—
35 and over		3,000	3	1·0	—	—	—	—	—	—	—	—	72	24·0	3	1·0	—	—
MANCHESTER C.B.																		
Under 35	M	6,060	11	1·8	—	—	—	—	—	—	4	0·7	46	7·6	—	—	—	—
35 and over		2,680	5	1·9	2	0·7	—	—	—	—	3	1·1	126	47·0	—	—	—	—
Under 35	F	4,210	9	2·1	1	0·2	—	—	—	—	1	0·2	31	7·4	—	—	—	—
35 and over		1,160	2	1·7	—	—	—	—	—	—	—	—	40	34·5	—	—	—	—
NOTTINGHAM C.B.																		
Under 35	M	5,380	8	1·5	—	—	—	—	—	—	1	0·2	19	3·5	—	—	—	—
35 and over		2,060	9	4·4	1	0·5	—	—	—	—	—	—	48	23·3	—	—	—	—
Under 35	F	4,800	10	2·1	—	—	—	—	—	—	1	0·2	15	3·1	2	0·4	—	—
35 and over		1,340	6	4·5	—	—	—	—	—	—	—	—	30	22·3	—	—	—	—
BRISTOL C.B.																		
Under 35	M	4,970	11	2·2	2	0·4	—	—	—	—	6	1·2	9	1·8	4	0·8	—	—
35 and over		3,400	11	3·2	—	—	—	—	—	—	9	2·6	33	9·7	9	2·6	—	—
Under 35	F	3,550	11	3·1	—	—	—	—	—	—	3	0·8	11	3·1	1	0·3	—	—
35 and over		1,180	1	0·8	—	—	—	—	—	—	3	2·5	12	10·2	1	0·8	—	—
LEEDS C.B.																		
Under 35	M	4,820	3	0·6	—	—	—	—	—	—	—	—	14	2·9	—	—	—	—
35 and over		1,940	9	4·6	—	—	—	—	—	—	—	—	20	10·3	—	—	—	—
Under 35	F	4,230	3	0·7	—	—	—	—	—	—	—	—	15	3·5	—	—	—	—
35 and over		920	2	2·2	—	—	—	—	—	—	—	—	6	6·5	—	—	—	—
SOUTHAMPTON C.B.																		
Under 35	M	3,830	13	3·4	—	—	—	—	—	—	1	0·3	11	2·9	—	—	—	—
35 and over		3,240	9	2·8	—	—	—	—	—	—	3	0·9	8	2·5	—	—	—	—
Under 35	F	2,950	11	3·7	—	—	—	—	—	—	—	—	3	1·0	—	—	—	—
35 and over		1,500	2	1·3	—	—	—	—	—	—	—	—	4	2·7	—	—	—	—

Table LXI.—*continued.*

Sex and Age		Bronchiectasis		Pneumoconiosis		Pneumoconiosis with Tuberculosis		Intrathoracic Growths: Malignant		Intrathoracic Growths: Benign		Intrathoracic Growths: Not Stated		Cardiovascular Lesions		All other Non-Tuberculous Conditions	
		No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
OXFORD C.B.																	
Under 35	M	6	1·3	—	—	—	—	—	—	—	—	—	—	1	0·2	9	2·0
35 and over		15	3·8	5	1·3	2	0·5	2	0·5	—	—	—	—	10	2·6	37	9·5
Under 35	F	1	0·2	—	—	—	—	—	—	1	0·2	—	—	3	0·6	18	3·4
35 and over		6	1·5	—	—	—	—	—	—	—	—	—	—	15	3·7	34	8·4
PORTSMOUTH C.B.																	
Under 35	M	6	1·4	—	—	—	—	—	—	—	—	—	—	15	3·4	28	6·4
35 and over		10	2·9	1	0·3	—	—	9	2·6	1	0·3	—	—	61	17·8	57	16·6
Under 35	F	8	1·2	—	—	—	—	—	—	2	0·3	—	—	33	5·0	23	3·5
35 and over		7	2·3	—	—	—	—	1	0·3	4	1·3	—	—	78	26·0	40	13·3
MANCHESTER C.B.																	
Under 35	M	14	2·3	—	—	—	—	—	—	3	0·5	—	—	7	1·2	32	5·3
35 and over		16	6·0	3	1·1	—	—	3	1·1	1	0·4	—	—	38	14·2	31	11·6
Under 35	F	13	3·1	—	—	—	—	—	—	1	0·2	—	—	11	2·6	13	3·1
35 and over		3	2·6	—	—	—	—	—	—	—	—	—	—	28	24·1	13	11·2
NOTTINGHAM C.B.																	
Under 35	M	2	0·4	—	—	—	—	—	—	—	—	—	—	8	1·5	9	1·7
35 and over		4	1·9	2	1·0	—	—	9	4·4	1	0·5	—	—	39	18·9	31	15·0
Under 35	F	—	—	—	—	—	—	—	—	—	—	—	—	7	1·5	20	4·2
35 and over		1	0·7	—	—	—	—	1	0·7	1	0·7	—	—	59	44·0	10	7·5
BRISTOL C.B.																	
Under 35	M	11	2·2	1	0·2	—	—	—	—	—	—	—	—	4	0·8	7	1·4
35 and over		8	2·4	2	0·6	1	0·3	5	1·5	2	0·6	—	—	17	5·0	17	5·0
Under 35	F	6	1·7	—	—	—	—	—	—	—	—	—	—	3	0·8	6	1·7
35 and over		1	0·8	—	—	—	—	—	—	1	0·8	—	—	7	5·9	4	3·4
LEEDS C.B.																	
Under 35	M	—	—	—	—	—	—	1	0·2	—	—	—	—	9	1·9	10	2·1
35 and over		2	1·0	2	1·0	—	—	5	2·6	2	1·0	—	—	1	0·5	2	1·0
Under 35	F	4	0·9	—	—	—	—	—	—	1	0·2	—	—	6	1·4	62	14·7
35 and over		—	—	—	—	—	—	—	—	—	—	—	—	3	3·3	31	33·7
SOUTHAMPTON C.B.																	
Under 35	M	—	—	—	—	—	—	—	—	—	—	—	—	4	1·0	17	4·4
35 and over		4	1·2	1	0·3	—	—	5	1·5	1	0·3	—	—	20	6·2	17	5·2
Under 35	F	2	0·7	—	—	—	—	—	—	—	—	—	—	3	1·0	3	1·0
35 and over		2	1·3	—	—	—	—	—	—	2	1·3	—	—	12	8·0	12	8·0

Table LXII.—Number of Cases of Tuberculosis requiring treatment or close clinic supervision observed during examinations made by Mass Radiography Units operating in England and Wales, distinguishing Category of persons examined, July-December, 1954. Rates per 1,000 examinations.

(Numbers of Examinations are based on a 10 per cent sample of Record Cards).

Category of Persons Examined		Males	Females Married	Females Single	Females Marital Status Not Stated	Persons
Out-patients and In-patients of Hospitals	Total No. of Examinations ..	3,480	2,810	750	—	7,040
	No. with respiratory tuberculosis requiring treatment or close supervision	7	5	1	—	13
	Rate	2·0	1·8	1·3	—	1·8
H.M. Forces Recruits	Total No. of Examinations ..	72,950	10	40	—	73,000
	No. with respiratory tuberculosis requiring treatment or close supervision	129	—	—	—	129
	Rate	1·8	—	—	—	1·8
Persons referred by General Practitioners	Total No. of Examinations ..	33,130	20,390	11,940	—	65,460
	No. with respiratory tuberculosis requiring treatment or close supervision.. ..	495	169	129	—	793
	Rate	14·9	8·3	10·8	—	12·1
School Children (School Groups)	Total No. of Examinations ..	91,710	—	88,620	—	180,330
	No. with respiratory tuberculosis requiring treatment or close supervision	56	—	84	—	140
	Rate	0·6	—	0·9	—	0·8
Contacts	Total No. of Examinations ..	13,110	5,590	8,570	—	27,270
	No. with respiratory tuberculosis requiring treatment or close supervision	54	19	26	—	99
	Rate	4·1	3·4	3·0	—	3·6
Persons covered by Special Surveys	Total No. of Examinations ..	310	—	—	—	310
	No. with respiratory tuberculosis requiring treatment or close supervision	—	—	—	—	—
	Rate	—	—	—	—	—
Persons in Factories/Offices (General Surveys)	Total No. of Examinations ..	439,190	107,490	145,480	—	692,160
	No. with respiratory tuberculosis requiring treatment or close supervision	706	147	267	—	1,120
	Rate	1·6	1·4	1·8	—	1·6
Persons in Prisons, Borstals,&c.	Total No. of Examinations ..	4,040	240	350	—	4,630
	No. with respiratory tuberculosis requiring treatment or close supervision ..	39	—	1	—	40
	Rate	9·7	—	2·9	—	8·6
General Public Volunteers	Total No. of Examinations ..	187,900	181,960	68,390	—	438,250
	No. with respiratory tuberculosis requiring treatment or close supervision	471	268	132	—	871
	Rate	2·5	1·5	1·9	—	2·0
Ante-natal cases	Total No. of Examinations ..	—	23,860	250	—	24,110
	No. with respiratory tuberculosis requiring treatment or close supervision	—	52	1	—	53
	Rate	—	2·2	4·0	—	2·2
Persons residing in or employed at Mental Hospitals and Mental Institutions	Total No. of Examinations ..	17,150	6,410	10,370	1,070	35,000
	No. with respiratory tuberculosis requiring treatment or close supervision	65	7	30	6	108
	Rate	3·8	1·1	2·9	5·6	3·1
All Groups	Total No. of Examinations ..	862,970	348,760	334,760	1,070	1,547,560
	No. with respiratory tuberculosis requiring treatment or close supervision	2,022	667	671	6	3,366
	Rate	2·3	1·9	2·0	5·6	2·2

Note :—No reports have been received from one Unit on examinations made during the period (29,590 examinations) and these have been deducted from the totals.

CANCER

Malignant neoplasms, including neoplasms of the lymphatic and haematopoietic tissues such as Hodgkin's Disease and the leukæmias (I.S.C. Nos. 140-205), accounted for 90,095 deaths in 1954 or 18 per cent of deaths from all causes. 47,313 deaths among men and 42,782 among women were recorded as due to cancer, the ratios of deaths from cancer to deaths from all causes being 18·2 per cent for men and 17·7 per cent for women. Cancer of the lung accounted for 13,995 deaths among men and 2,336 among women, the male deaths being 1,114 more than in 1953 and the female 85. If cancer of the lung is omitted the ratio of deaths from cancer to total deaths is for men 12·8 per cent and for women 16·7 per cent.

Over the last 10 years the mortality from cancer for men has risen considerably while that for women has fallen slightly. The following table shows the Comparative Mortality Index (base year 1938) for cancer of all sites and certain groups of sites for the years 1944 and 1954.

Site	Male		Female	
	1944	1954	1944	1954
All Malignant Neoplasms including the Reticuloses ..	1·01	1·16	0·94	0·92
Buccal cavity and Pharynx	0·77	0·50	0·89	0·86
Digestive organs	0·97	0·83	0·91	0·79
Respiratory system	1·40	2·83	1·18	1·72
Breast	1·02	1·17	0·97	0·96
Uterus			0·90	0·70
Other female genital organs			1·03	1·10
Male genital organs	0·98	1·21		
Urinary organs	1·04	1·40	1·14	1·35
Skin	0·81	0·55	0·87	0·67
Brain and Nervous System	1·03	1·67	0·98	1·74
Hodgkin's Disease	1·30	1·29	0·93	1·12
Leukæmia and Aleukæmia	1·21	1·82	1·15	1·84

In both sexes falls in mortality have been recorded from cancer of the buccal cavity and pharynx, digestive tract and skin. These sites account in both sexes for nearly half the deaths attributed to cancer. In women the C.M.I. for uterine cancer has fallen while that for breast cancer shows little change. At all other site groups mortality has risen in both sexes.

The C.M.I. for cancer of the respiratory system in men, to which 31 per cent of all cancer deaths were attributed in 1954, is now more than double that in 1944, while in women, where the respiratory system includes slightly more than 6 per cent of all female cancers, the C.M.I. has increased by about 50 per cent during the same period.

Table LXV (page 143) shows for some of the more important sites the cancer mortality during this century in successive decades and for the 5 years 1950-54, standardised upon the 1901 population. The figures have been adjusted as far as possible to allow for the changes in classification and method of certification that have taken place during the period. Complete comparability has not

always been possible but where minor sites have been included in some years and omitted in others this has been recorded in a footnote. In no case do these inclusions or exclusions appreciably alter the recorded rate.

At the beginning of the century the mortality from cancer among women exceeded that among men. In both sexes the rate increased until the third decade after which the female rate declined while the male rate continued to rise. If cancer of the lung and bronchus is excluded the female trend is not changed though the fall in mortality during the last twentyfive years is more pronounced; the risk of death from all other forms of cancer among men then declines concurrently with that among women though to a lesser degree, so that whether cancer of the lung is excluded or not an inversion of rates occurs in the decade 1921-30. Before that period women were more liable than men to die from cancer and from then onwards the reverse is true.

Among men the current mortality from cancer of the lip and tongue is about one fourth that experienced at the beginning of the century while the rates for cancer of the oesophagus, and mouth and tonsil have fallen to a lesser degree. Considerable falls are recorded in the female rates for lip and tongue but the mortality from cancer of the mouth and tonsil and oesophagus has shown little change. In both sexes the mortality attributed to cancer of the skin fell steadily until 1940-49 since when it has risen slightly.

The standardised mortality rates for cancer of the stomach, intestine and rectum in men rose until 1931-39 but since have fallen considerably though the rates in 1950-54 still exceed those of 1901-10. A similar trend occurred in cancer of these sites among women though the magnitude of the recent fall is greater, and, for cancer of the stomach and rectum the 1950-54 rate is lower than that in 1901-10.

Mortality from cancer of the larynx (for which figures are available from 1911 only) increased for both sexes during the earlier years, but fell considerably in 1940-49 and 1950-54, the rate for the latter period being below that for 1911-20.

In women cancer mortality has increased to more than three times the 1901-10 rate for ovarian cancer and fallen to nearly half for uterine cancer. Cancer of the breast increased until 1931-39 but has since then fallen slightly. Of male cancers, cancer of the penis and scrotum show recent falls in mortality but the rates from cancer of the prostate have risen to nearly seven times the 1901-10 figure while cancer of the testis is now nearly twice as common as in 1911-20.

In both sexes the rates from cancer of the pancreas, kidney and suprarenal and bladder have increased steadily, though to a greater extent in men than women.

The mortality from cancer of the lung and bronchus in men rose more than thirty times between 1901-10 and 1950-54, the main increase commencing after the second decade of the century; in women the rate rose less than seven times, the main increase starting a decade later.

The mortality from cancer of the pharynx among women remained constant until 1950-54 when it suddenly rose to more than double its previous rate. The male mortality rate which was increasing between 1911-20 and 1931-39 fell for the decade 1940-49 but rose again to a little in excess of the previous figures in 1950-54.

In Table LXVI (page 144) the age specific death rates from cancer at " all sites ", cancer of the pharynx, oesophagus, stomach and duodenum, larynx and trachea, lung and bronchus are shown separately for each sex, for the years

1911-20, 1921-30, 1931-39, 1940-44, 1945-49 and 1950-54. The Equivalent Average Death Rate (0-64) indicates the importance of each form of cancer as a cause of death up to the end of the normal period of working life.

Below 35 years of age total cancer rates have increased in both sexes, more rapidly for males than females, with the result that the male E.A.D.R. (0-34) which in 1911-20 was less than the corresponding female rate has since 1940-44 been in excess. Male cancer rates in the four 10 year age-groups between 35 and 74 have consistently risen while at the same ages the female rates have fallen. For ages 75 years and over male rates have risen rapidly and female rates though flunctuating considerably are now higher than in 1911-20. The E.A.D.R. (0-64) for men shows a consistent rise and that for women an equivalent fall.

The mortality rates from cancer of the pharynx have increased significantly in both sexes during the last few years, the greatest increase being among women where the current rate is double the average for 1945-49. This group of sites comprises four heads in the International Statistical Classification:— oral mesopharynx, nasopharynx, hypopharynx and pharynx unspecified. The increase has occurred mainly among neoplasms originally in the hypopharynx and to a lesser extent in those of the nasopharynx.

Under the age of 74 death rates from cancer of the oesophagus in men have fallen steadily since 1921-30, the E.A.D.R. (0-64) being now one third of the figure for that decade. The female mortality, which after the age of 54 rose during the first three decades, has since fallen but less rapidly and at ages 65-74 there has been little recent change while at ages 75 and over the rate in both sexes has risen.

Since the period 1931-39 the E.A.D.R. (0-64) for cancer of the stomach among men has fallen by about one eighth. At ages 65 and over the rate of mortality has shown little consistent change. During the same period female rates for ages below 74 years have declined even more rapidly, the E.A.D.R. (0-64) having fallen 29 per cent. At ages 75 years and over the rates show no material change.

Since 1931-39 the age specific death rates from cancer of the larynx and trachea in men have fallen rapidly in all age-groups below 75 years. In the age-groups 45-64 the fall started a decade earlier and the E.A.D.R. (0-64) is now less than one half the 1921-30 figure. Over 75 years of age the rate has since 1931-39 remained relatively constant. The E.A.D.R. (0-64) among women showed no change before 1944, but in 1950-54 it had fallen to half the rate in 1940-44. The mortality among women aged 45-54 commenced to fall after the period 1931-39 but at all greater ages rates declined only between 1945-49 and 1950-54.

The increased mortality from cancer of the lung during the last half century is strikingly demonstrated. The E.A.D.R. (0-64) for men in 1950-54 was 26 times as high as in 1911-20, while for women the figure was six times as high. The rates for the three 5 year periods between 1940 and 1954 suggest that below the age of 55 the rate of increase in male mortality is slackening. The percentage increase in rates for the age-group 35-44 between 1940-44 and 1945-49 was 23 per cent and between 1945-49 and 1950-54 was 10 per cent. At ages 45-54 the figures are 50 per cent and 28 per cent respectively, while for the age-groups 55-64 they are 59 per cent and 54 per cent.

Table LXIX (page 153) shows, separately for each sex, the relative importance as a cause of death of cancer of the most important site groups. The percentages of deaths from cancer at these sites are given for the three periods 1931-39, 1940-49 and 1950-54.

The digestive organs (in which is included cancer of oesophagus, stomach, intestine, rectum, pancreas and gall bladder) in both sexes account for the largest proportion of lethal cancers, the proportions being at present similar in both sexes, though before the recent rise of lung cancer a greater proportion of cancer deaths in men than women were attributed to cancer of the digestive system. Cancer of the respiratory system is the site of next importance in men whereas cancer of the reproductive organs (including cancer of the female breast) takes second place in women. In both sexes the fifth and sixth places are taken by cancer of the urinary system and of the mouth and pharynx.

	1931–39		1940–49		1950–54	
	M	F	M	F	M	F
Buccal cavity and Pharynx	8·1	1·2	4·7	1·1	3·5	1·6
Digestive system	56·1	44·4	52·3	44·4	43·8	42·8
Reproductive system	7·0*	37·7	7·7*	37·0	7·9*	36·0
Respiratory system (including larynx)	11·7	3·3	19·5	4·6	29·4	5·9
Urinary system	4·4	2·2	4·9	2·5	5·5	3·0

* Excluding scrotum.

Among cancers of the digestive system the proportion of gastric and oesophageal cancer is much higher among men than women while the reverse is found in cancer of the large intestine and gall bladder.

Cancer of the reproductive organs accounts for more than one third of the deaths from cancer in women but only about one twelfth in men. Cancer of the female breast is now twice as common as cancer of the uterus and more than three times as common as cancer of the ovary. In men prostatic cancer is by far the most important site.

Cancer of the bladder accounts for three quarters of male cancers of the urinary system and less than two thirds of female cancers.

In men the proportion of respiratory to total cancer is about 30 per cent and bronchial cancer is sixteen times more frequent than laryngeal; in women this site accounts for but 6 per cent of all cancers and one tenth of the cancers arise in the larynx.

Regional differences in mortality rates

Table LXVII (page 146) gives the mortality rates for certain age-groups in the standard regions ,for regional groups, conurbations and urban and rural aggregates of England and Wales for :—

Cancer of all sites (I.S.C. Nos. 140-205)

Cancer of the Stomach (I.S.C. No. 151)

Cancer of the Lung (I.S.C. Nos. 162 and 163)

For the purpose of local comparisons these rates can be roughly standardised for ages 35-74 which cover the ages in which cancer deaths are most frequent. By taking age-group 65-74 as the upper limit an Equivalent Average Death Rate (35-74) can be worked by aggregating the crude rates at ages 35-, 45-, 55-, 65-74, and dividing this by four (the number of 10 year age-groups). If the E.A.D.R. (35-74) for England and Wales is taken as 100 the following ratios for the four regional groups appear:—

Cancer of all sites	Male	Female
England and Wales	100	100
North of England	103	103
Midlands and Eastern Regions	93	99
South of England	102	97
Wales (including Monmouthshire)	100	108

In both sexes total cancer mortality in England is highest in the North, but among the standard regions the London and South Eastern has the highest male rate. This is accounted for by the high mortality from cancer of the lung in this region, for, if the mortality in this region from this cause were the same as that for England and Wales as a whole, the male cancer " all sites " E.A.D.R. would be almost identical with that for England and Wales.

An urban/rural gradient is found in the rates of both sexes, whether in England and Wales as a whole or in each regional group, steeper—again because of the gradient of male lung cancer—among men than women.

The male and female ratios in the conurbations are 111 per cent and 103 per cent respectively and in the rural districts 85 per cent and 94 per cent.

Cancer of the Lung

In the Statistical Review Text Volume for 1951 a table of regional mortality rates for that year was included (page 198), similar to Table LXVII.

Though only three years have elapsed the C.M.I. for cancer of the respiratory system in men has risen from 2·39 to 2·83 and for women from 1·62 to 1·72.

The male index has risen nearly 20 per cent and a detailed comparison of the two tables shows some interesting relationships.

In all age-groups 45 years and over, with two small exceptions, the mortality has risen in England and Wales as a whole, in each of the four regional groups, in each population aggregate of England and Wales and in each individual conurbation.

In the age-group 35-44 the mortality rate for England and Wales as a whole, in the total of conurbations and in the total of rural districts is now higher but in other urban areas the rate has fallen. In the North of England and the Midlands and Eastern regional groups the mortality rate in the rural districts is the same though the rate for each of these regional groups as a whole has risen. In the South of England regional group the mortality in this age-group has not changed, though in Greater London it has fallen, but has risen in the rural districts. To estimate the change in mortality for any given region or aggregate summary over such a short period, it is legitimate and simpler to use the crude death rate. The percentage increase of the 1954 crude death rate compared with that in 1951 is:—

	Percentage increase
England and Wales	24
Conurbations	23
Areas outside conurbations	
Urban areas with populations of 100,000 and over	21
Urban areas with populations of 50,000 and under 100,000	18
Urban areas with populations under 50,000	24
Rural Districts	37

	All Areas	*Rural Districts*
North of England	25	31
Midland and Eastern	24	35
South of England	23	35
Wales (including Monmouthshire)	23	48

The mortality from cancer of the lung and bronchus appears to be increasing at the same rate in each of the four regional groups, but in each regional group a greater increase in the rates for rural districts than in the rates for aggregates of

urban areas is recorded. During the past five years the deaths recorded from cancer of the lung in rural districts as a percentage of the total for England and Wales were:—

1950	1951	1952	1953	1954
12·8	12·7	12·7	13·3	14·1

This may represent a tendency to a " levelling up " of rates between urban areas and rural districts but so far the trend does not appear to be clearly established.

Using the E.A.D.R. for age-groups 35-74 as an estimate of mortality, the following table shows for 1954 the proportionate rates in urban and rural aggregates of population for England and Wales as a whole and for each of the four regional groups, the rate for England and Wales being taken as 100:—

	England and Wales	North of England	Midlands and Eastern Regions	South of England	Wales (including Monm'th-shire)
Total of England and Wales and each Regional Group	100	102	87	110	80
Aggregates summary (by type of area)					
Conurbations	124	118	112	132	
Areas outside conurbations					
Urban areas with populations of 100,000 and over	111	120	102	114	106
Urban areas with populations of 50,000 and under 100,000 ..	92	90	85	97	
Urban areas with populations under 50,000	84	82	85	89	72
Rural Districts	70	65	64	78	70

Mortality rates are in general higher in the South of England than elsewhere and analysis of the rates in the standard regions shows that this is due to the high rate in the London and South Eastern, where three quarters of the total population of the region live in Greater London. In the North of England 46 per cent live within the conurbations while in the Midlands and Eastern group only 20 per cent. Despite the comparatively high rate in the rural districts of Southern England the influence of geographical location appears to affect the mortality rates to a very small extent compared with the degree of urbanisation.

**England and Wales .. ..

An analysis of the female rates reveals an almost identical pattern though the differences are less well marked.

Cancer of the Stomach

Examination of the regional rates for cancer of the stomach shows that at each age-group and in both sexes they are high in Wales and the North of England. In the following table the percentage ratios of the E.A.D.R. 35-74 to that for England and Wales are shown for each regional group and type of area within that group. No general correlation between urbanisation and mortality is seen but a geographical distribution is evident in each type of urban area and in the rural districts. In each type of area the rates are highest in Wales and next highest in the North of England.

	England and Wales		North of England		Midlands and Eastern Regions		South of England		Wales (including Monm'th-shire)	
	M	F	M	F	M	F	M	F	M	F
Total of England and Wales and each Regional Group..	100	100	113	120	92	92	88	82	141	146
Aggregates summary (by type of area)										
Conurbations	102	103	113	118	105	129	93	85		
Areas outside conurbations										
Urban areas with populations of 100,000 and over ..	111	101	121	121	100	88	102	89	135	125
Urban areas with populations of 50,000 and under 100,000	96	91	106	118	95	80	87	70		
Urban areas with populations under 50,000	99	104	118	127	91	89	75	87	130	131
Rural Districts	92	92	99	120	79	77	81	72	165	174

Of the standard regions in England the highest rates in the South are in the South Western region and in the Midlands and Eastern group in the Midland region. In the North the rates for both sexes are highest in the Northern region but the rate for males in the East and West Ridings is equally high.

Standard Regions	Males	Females
Northern	116	132
East and West Ridings	116	116
North Western	109	118
North Midland	92	83
Midland	97	111
Eastern	86	67
London and South Eastern	89	81
Southern	80	71
South Western	92	97

In both sexes the mortality rates in the Eastern, London and South Eastern and Southern Regions are markedly below the national average.

The pattern here is predominantly geographic, in marked contrast to that of cancer of the lung.

Cancer Mortality in other Countries

In 1952 W.H.O. issued an Epidemiological and Vital Statistics Report on the Evolution of Cancer Mortality in Europe and some other countries during the Twentieth Century (Epidem. Vital Statist. Rep. 1952. V. 1-144). From the tables published in that volume the comparisons in this section have been made.

In general, the figures given for the year 1949 have been abstracted but in a few instances where later figures were not available data for 1947 or 1948 have been used.

International comparisons of mortality are extremely difficult, but especially so in such a disease as cancer where incidence increases so rapidly towards the latter years of life. Thus all other factors being equal we would expect to find a higher death rate from cancer among those countries containing the largest proportion of elderly people.

The standard of certification and medical care vary greatly, and in many countries not all death certificates are issued by medical practitioners. Access to X-ray facilities and the use of laboratory aids, upon which confirmation of the diagnosis at internal sites often depends, must influence considerably the number of cases reported. Despite all these difficulties international comparisons can be a valuable epidemiological tool and excesses or deficits of cancer at certain sites may appear that cannot be explained upon a basis of an ageing population or in terms of varying medical care or certification.

In Table LXX (page 154) the crude death rates (male and female) from cancer at " all sites ", the number of reported deaths in each sex from cancer and the percentage of deaths attributed to cancer of broad site groups to total deaths from cancer are given for twelve European countries and eight outside Europe.

The crude death rates (persons) from cancer in these countries vary over wide limits. Lowest are Spain, Japan and Chile with rates of less than 100 per 100,000 while in England and Wales, Scotland and Switzerland the rate is greater than 180 per 100,000. Part of the difference can be accounted for by the proportion of older people in the population; in Japan and Chile the proportion of persons aged 60 and over per thousand inhabitants was 76 and 59, respectively, while in England and Wales, Scotland and Switzerland the proportions were 159, 144 and 138. Spain, however, with a crude death rate of only 73 per 100,000 had a population with 101 persons aged 60 and over per thousand inhabitants, while Finland, though the crude cancer death rate was 126 per 100,000, had but 108 persons of 60 and over per thousand. It is very probable that such differences as these may be mainly if not entirely due to differences in accuracy of certification, and it is most improbable that any valid conclusion can be drawn from comparisons of the crude death rates. Though by no means free from fallacies more reliable deductions can be drawn from the proportion of deaths recorded at certain sites to the total cancer deaths and the following discussion will be based entirely on such ratios.

Cancer of the digestive organs is the most frequently recorded site for both sexes in all the countries shown. The proportion of male cancer at this site is higher than female in all but two countries, Finland and Uruguay, where the proportions are approximately equal. The proportion of cancer of the digestive organs in men varies from 85·9 per cent of all male cancer in Japan to 43·5 per cent in the U.S.A. It is somewhat remarkable that the proportion of cancer at this site is uniformly low in the English speaking countries, the lowest rates being found in the U.S.A., the Union of South Africa (whites), England and Wales, New Zealand, Australia, Canada and Scotland, in that order. Such a linguistic grouping strongly suggests some common dietetic habit, perhaps connected with the use of animal or vegetable fats for cooking. Among European countries the percentage of male cancer of the digestive organs is highest in Finland, Norway, Germany and Italy, where it accounts for more than 60 per cent of male cancer. Female cancer of the digestive tract is lowest in the U.S.A.,

South Africa, Canada and Australia but the Danish proportion is less than that in England and Wales, while Switzerland, Holland, Spain and France have all lower proportions than that found in Scotland.

In men cancer of the respiratory tract is the second most important site, the proportion of cancer at this site to total male cancer ranging from 4·5 per cent in Japan to 24·9 per cent in England and Wales. The highest proportion of male respiratory cancer in European countries is found in England and Wales, Finland and Scotland and the lowest in Norway, Italy and the Republic of Ireland. Among the other English speaking countries the percentage varies very little, from 15·4 per cent in New Zealand to 12·9 per cent in Canada. The ratio of male and female deaths from respiratory cancer varies from 2·6:1 in Norway to 5·6:1 in Holland. The ratio is greater than 5:1 in Finland, Switzerland, New Zealand and less than 4:1 in Scotland, France, Italy, the Republic of Ireland, South Africa, Canada and Chile.

The relative incidence of cancer of the female reproductive organs varies greatly in different countries ; cancer of the uterus, other female genital organs and breast together account for 40 per cent of all cancer in women in New Zealand, while in Australia, the U.S.A., Canada, South Africa, England and Wales and Denmark the proportion is only a little less. At the other end of the scale in France, Spain and Finland they amount to 25 per cent or under.

The most striking international differences are seen in the proportions of deaths attributed to cancer of the female breast and uterus. In the Republic of Ireland cancer of the breast is twice as frequent as uterine cancer, while in Japan uterine cancer is six times as common a cause of death as breast cancer. In Germany, Spain, France, Italy, Chile and Uruguay uterine cancer is recorded more frequently than breast, but in all other countries for which figures are available the reverse is true, the excess of breast cancer being particularly high in the Republic of Ireland, England and Wales, Scotland, Holland, Switzerland and New Zealand, but small in the U.S.A. and South Africa.

Breast cancer accounts for more than one half the deaths from cancer of the female reproductive organs in the following countries:— England and Wales, Scotland, Republic of Ireland, Holland, Switzerland, Canada and New Zealand. In Norway, France, Finland, Italy, South Africa, the U.S.A. and Uruguay, the proportion is between 40 per cent and 49 per cent while in Spain it is 36 per cent. In Chile and Japan it is 15 per cent and 14 per cent respectively.

The average age of onset of breast cancer is somewhat later than that of uterine and ovarian cancer and some deficit of breast cancer might be expected in countries where the proportion of old people in the population is small as in Japan and Chile, but the differences are of too great a magnitude to be explained solely on a basis of age and population. Cancer of the breast presents few difficulties in diagnosis when the disease is established and preponderance of uterine cancer in certain countries can scarcely be explained in term of inaccurate certification. It seems certain that very large national differences do exist, whether racial or environmental, that would repay a more detailed study.

Cancer of the other female genital organs, of which the ovary is the most important site, amounts to 6 per cent or more of all female cancer in the following countries:— England and Wales, Denmark, Switzerland, U.S.A., Australia and New Zealand. It comprises less than 3 per cent of all female cancer in Japan, Chile, Italy, Republic of Ireland, France and Spain and it is noteworthy that in these six countries, with the exception of the Republic of Ireland, the number of recorded deaths from uterine cancer exceeded those for cancer of the female breast.

Cancer of the male genital organs, of which in most countries cancer of the prostate is the largest component, accounts for 13 per cent of all male cancer in New Zealand and more than 10 per cent in Australia, Norway, Canada and the U.S.A. In Japan the proportion is below 1 per cent and in Spain, Finland, Italy and Chile 6 per cent or less.

Cancer of the urinary organs in all countries is, in proportion, more frequently recorded as a cause of death in men than in women. In Japan alone the difference is very small, and here the proportion of deaths, in both sexes, from cancer at this site amounts to but 1 per cent of the total, the lowest here recorded. Percentages among men of 6 per cent and over are found in Uruguay, Canada and the U.S.A. while, apart from Japan, the lowest proportions of 3 per cent and under are in Finland, France, the Republic of Ireland and Chile.

In both sexes the highest percentage of deaths from cancer of mouth and pharynx is found in the Republic of Ireland where they account for 7·6 per cent of all cancers in men and 2·2 per cent in women. The lowest percentages occur in Germany, 1·2 per cent for men and 0·5 per cent for women. In men the proportion of cancer at this site is 5 per cent or more in Canada, Scotland, Australia and Italy and is less than 2 per cent of all cancers in Finland, Chile and the Netherlands.

Cancer of the skin in men is most frequent as a cause of death in South Africa, Republic of Ireland and Australia where the proportion exceeds 3 per cent. South Africa and Australia are both semi-tropical countries and the populations concerned are of the fair skinned type upon whom insolation is probably an important factor.

Table LXIII.—Cancer (6th Revision, Nos. 140-205): sex and age specific death rates per million living from cancer at various sites and the percentage of mortality at each site to " All Sites " England and Wales, 1954—Males

Int. Classn. No. (6th Revision)	Site or organ	All ages	0–	5–	15–	25–	35–	45–	55–	65–	75–	85 and over	Per cent of all sites
140 141 142 143 144	Lip Tongue Salivary gland Floor of mouth Other parts of mouth and mouth unspecified	44	*1*	—	*2*	*2*	*3*	18	65	222	613	878	2·0
145 146 147 148	Oral mesopharynx Nasopharynx Hypopharynx Pharynx unspecified	27	—	*1*	*3*	*1*	*6*	15	59	141	277	338	1·2
150	Œsophagus	61	—	—	*0*	*1*	8	37	123	330	683	811	2·8
151	Stomach	369	*1*	—	*1*	12	88	318	919	1,981	2,979	2,581	16·6
152 153	Small intestine, including duodenum Large intestine, except rectum	195	—	—	*2*	8	43	117	367	999	2,219	2,811	8·8
154	Rectum	157	—	—	*2*	6	27	95	288	854	1,737	2,108	7·0
155	Biliary passages and liver (stated to be primary site)	26	—	*0*	*1*	*1*	*5*	20	62	139	215	*230*	1·2
157	Pancreas	83	—	—	—	*3*	20	71	204	448	667	784	3·7
161	Larynx	31	—	—	*0*	*0*	*3*	23	79	175	263	284	1·4
162 163	Trachea, bronchus and lung specified as primary Lung and bronchus unspecified as to whether primary or secondary	657	*1*	*0*	*5*	25	181	934	2,410	3,040	2,018	838	29·6
170	Breast	4	—	—	—	—	*2*	*4*	*8*	19	*30*	*27*	0·2
177	Prostate	157	—	*0*	—	*0*	*2*	21	160	904	2,520	3,297	7·1
178	Testis	10	*1*	*1*	9	17	17	7	11	14	*30*	—	0·5
179	Other and unspecified male genital organs	6	—	—	*0*	*1*	*1*	*5*	11	29	67	*68*	0·3
180	Kidney	32	13	*1*	*1*	*2*	*6*	40	104	144	138	*41*	1·4
181	Bladder and other urinary organs	87	*1*	—	—	*1*	11	55	214	467	848	1,027	3·9
190 191	Skin (malignant melanoma) Skin (malignant neoplasm)	22	*1*	—	*1*	*6*	9	15	31	92	243	595	1·0

Table LXIII.—*continued.*

Int. Classn. No. (6th Revision)	Site or organ	All ages	0–	5–	15–	25–	35–	45–	55–	65–	75–	85 and over	Per cent of all sites
193	Malignant neoplasm of brain and other parts of nervous system	39	13	11	10	16	40	76	118	56	*25*	—	1·8
194	Thyroid gland	5	—	—	*0*	*0*	*2*	7	*8*	25	*28*	*41*	0·2
195	Other endocrine glands	3	*9*	*2*	*1*	*1*	*1*	*3*	*7*	*6*	*2*	—	0·1
196 197	Bone (including jaw bone) Connective tissue	22	*2*	*5*	13	8	11	18	41	91	140	*189*	1·0
158 164 198	Peritoneum Mediastinum Secondary and unspecified malignant neoplasm of lymph nodes	13	*3*	*1*	*2*	*4*	*4*	13	37	62	68	*54*	0·6
200	Lymphosarcoma and reticulosarcoma	22	*7*	6	8	*5*	10	28	49	92	70	*68*	1·0
201	Hodgkin's disease	23	—	*4*	16	24	29	30	39	51	39	*27*	1·0
202	Other forms of lymphoma (reticulosis)	4	*2*	—	*0*	*2*	*3*	7	11	*13*	*19*	—	0·2
203	Multiple myeloma (plasmocytoma)	10	—	*0*	—	*2*	*5*	13	38	41	35	—	0·5
204	Leukæmia and aleukæmia	54	52	28	24	21	36	48	97	180	184	*162*	2·4
205	Mycosis fungoides	*1*	—	—	—	—	—	*1*	*2*	*5*	*2*	—	0·0
Others in 140–205	Remaining sites	58	*1*	*2*	*1*	*4*	13	50	159	292	433	473	2·6
140–205	**Total**	**2,223**	**106**	**64**	**105**	**173**	**587**	**2,087**	**5,720**	**10,914**	**16,590**	**17,730**	**100·0**
193 223 237	Malignant neoplasm of brain and other parts of nervous system Benign neoplasm of brain and other parts of nervous system Neoplasm of unspecified nature of brain and other parts of nervous system	63	23	19	19	25	58	115	186	109	49	—	

Table LXIV.—Cancer (6th Revision Nos. 140-205): sex and age specific death rates per million living, from cancer at various sites and the percentage of mortality at each site to " All Sites " England and Wales, 1954—Females.

Int. Classn. No. (6th Revision)	Site or organ	All ages	0–	5–	15–	25–	35–	45–	55–	65–	75–	85 and over	Per cent of all sites
140 141 142 143 144	Lip Tongue Salivary gland Floor of mouth Other parts of mouth and mouth unspecified	13	—	*0*	*0*	*1*	*4*	9	17	48	100	161	0·7
145 146 147 148	Oral mesopharynx Nasopharynx Hypopharynx Pharynx unspecified	15	—	—	*0*	*2*	8	21	30	49	55	*62*	0·8
150	Œsophagus	40	—	—	—	*1*	6	25	68	149	314	404	2·2
151	Stomach	273	—	—	*2*	13	43	161	433	1,074	2,115	2,366	14·6
152 153	Small intestine, including duodenum Large intestine, except rectum	242	—	—	*1*	12	57	154	380	851	1,896	2,789	13·0
154	Rectum	108	—	—	*1*	7	28	74	184	381	776	1,099	5·8
155	Biliary passages and liver (stated to be primary site)	35	—	—	—	*1*	*4*	19	71	148	243	193	1·9
157	Pancreas	67	—	—	*0*	*1*	10	40	111	275	462	689	3·6
161	Larynx	8	—	—	—	*1*	*3*	10	20	29	28	*31*	0·4
162 163	Trachea, bronchus and lung specified as primary Lung and bronchus, unspecified as to whether primary or secondary	102	—	—	*2*	11	41	122	235	379	388	373	5·5
170	Breast	364	—	—	*1*	34	228	528	747	1,060	1,537	2,354	19·5
171	Cervix uteri	105	*1*	—	—	20	72	172	239	302	321	304	5·6
172	Corpus uteri	52	—	—	—	*1*	12	44	136	184	262	267	2·8
173 174	Other parts of uterus, including chorionepithelioma Uterus, unspecified	11	—	—	*1*	*2*	*6*	14	30	33	29	*50*	0·6
175	Ovary, Fallopian tube and broad ligament	114	—	*1*	*6*	14	63	202	283	318	313	292	6·1
176	Other and unspecified female genital organs	21	—	*0*	*1*	*2*	*4*	13	32	75	161	280	1·1

Table LXIV.—*continued.*

Int. Classn. No. (6th Revision)	Site or organ	All ages	0–	5–	15–	25–	35–	45–	55–	65–	75–	85 and over	Per cent of all sites
180	Kidney	20	*9*	*4*	*0*	*2*	*6*	15	33	75	106	130	1·1
181	Bladder and other urinary organs	37	—	—	—	*2*	*4*	15	54	152	299	404	2·0
190 191	Skin (malignant melanoma) Skin (malignant neoplasm)	20	—	—	*2*	7	12	15	28	54	112	323	1·0
193	Malignant neoplasm of brain and other parts of nervous system	27	17	13	9	18	24	47	62	36	*11*	*12*	1·5
194	Thyroid gland	12	—	—	—	*1*	*1*	9	25	43	73	*106*	0·6
195	Other endocrine glands	2	*5*	*1*	*0*	*0*	*1*	*2*	*3*	*2*	*2*	—	0·1
196 197	Bone (including jaw bone) Connective tissue	18	*2*	*6*	9	*5*	*6*	13	37	60	75	*106*	1·0
158 164 198	Peritoneum Mediastinum Secondary and unspecified malignant neoplasm of lymph nodes	13	—	*1*	*0*	*3*	*5*	12	28	49	51	*12*	0·7
200	Lymphosarcoma and reticulosarcoma	15	*2*	*2*	*3*	*5*	8	15	29	53	48	*31*	0·8
201	Hodgkin's disease	13	—	*2*	8	12	11	11	22	32	30	*12*	0·7
202	Other forms of lymphoma (reticulosis)	3	*4*	*0*	*1*	*1*	*1*	*4*	*5*	*6*	*5*	*6*	0·1
203	Multiple myeloma (plasmocytoma)	9	—	—	—	*0*	*3*	12	28	35	25	—	0·5
204	Leukæmia and aleukæmia	44	36	21	20	15	27	38	74	125	132	*112*	2·4
205	Mycosis fungoides	*1*	—	—	—	—	—	*1*	*2*	*2*	*3*	—	0·0
Others in 140–205	Remaining sites	61	*5*	—	*1*	*3*	15	53	110	224	378	540	3·3
140–205	**Total**	**1,861**	**80**	**52**	**72**	**197**	**711**	**1,871**	**3,556**	**6,305**	**10,350**	**13,509**	**100·0**
193 223 237	Malignant neoplasm of brain and other parts of nervous system Benign neoplasm of brain and other parts of nervous system Neoplasm of unspecified nature of brain and other parts of nervous system	47	26	18	14	27	40	80	107	76	27	*31*	

Table LXV.—Cancer Mortality: Rates per million living (standardised) for the more important sites for each sex, 1901-10, 1911-20, 1921-30, 1931-39, 1940-49 and 1950-54*

	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
	All Sites (1)		All Sites less lung and bronchus		Lip		Tongue		Mouth (2),	
1901–10	784	942	774	935	12·8	0·8	43·1	4·4	?	?
1911–20	897	959	884	952	12·6	0·7	50·8	4·3	23·5	3·0
1921–30	1,000	980	975	970	11·4	0·7	45·9	3·8	28·2	3·6
1931–39	1,053	962	968	940	9·2	0·6	33·3	3·5	26·3	3·4
1940–49	1,073	892	887	858	5·1	0·4	18·8	3·2	14·3	2·5
1950–54	1,175	855	840	808	2·8	0·2	11·4	2·8	9·7	3·0
	Pharynx (3)		Oesophagus		Stomach		Gall bladder		Intestine (4)	
1901–10	?	?	51·2	14·6	167·2	133·0	?	?	63·5	72·3
1911–20	10·8	3·0	60·6	16·5	186·4	139·0	6·0	11·6	96·8	109·2
1921–30	12·6	3·0	64·1	18·0	220·2	154·2	8·7	16·4	124·8	128·5
1931–39	13·1	3·3	56·8	19·0	232·5	152·4	9·3	15·8	139·9	138·1
1940–49	9·8	3·1	42·5	16·7	219·5	130·9	7·7	12·1	132·8	126·9
1950–54	13·9	7·1	35·8	16·2	210·9	118·2	8·8	12·5	109·4	106·2
	Rectum and Anus (5)		Ovary and Fallopian tube		Scrotum	Uterus	Breast		Penis	
1901–10	79·8	55·9	—	19·2	?	?	1·5	158·4	?	—
1911–20	93·6	59·3	—	24·3	2·4	174·4	1·6	170·8	6·6	—
1921–30	105·0	59·3	—	36·1	2·7	157·7	1·8	188·4	6·4	—
1931–39	112·0	57·6	—	48·2	2·2	132·2	2·1	197·8	6·0	—
1940–49	107·2	55·5	—	54·9	1·3	111·2	2·0	184·2	4·1	—
1950–54	87·9	47·4	—	60·5	0·7	90·6	1·9	182·0	2·9	—
	Mediastinum		Skin (6)		Larynx (only)		Lung and bronchus (7)		Pancreas	
1901–10	8·1	4·5	?	?	?	?	10·2	7·0	14·5	11·8
1911–20	9·2	4·6	17·6	10·9	23·9	6·0	12·7	7·0	16·7	13·1
1921–30	12·6	5·8	17·5	10·1	31·2	7·1	25·1	9·6	26·3	19·4
1931–39	9·3	3·8	16·1	9·5	30·1	7·4	85·6	22·1	33·6	24·6
1940–49	9·0	3·3	12·7	8·0	23·8	6·7	186·8	33·9	37·1	25·1
1950–54	3·1	1·2	13·0	9·6	19·2	4·0	335·6	47·3	44·0	27·6
	Kidney and Suprarenal (8)		Bladder (9)		Prostate		Testis		Bones (10)	
1901–10	8·4	7·6	?	?	11·8	—	?	—	?	?
1911–20	9·1	7·2	28·2	9·7	26·5	—	4·9	—	15·7	12·0
1921–30	11·7	8·8	30·3	11·3	47·3	—	5·8	—	17·5	13·4
1931–39	14·8	10·1	33·6	11·8	60·6	—	6·7	—	17·8	13·2
1940–49	14·6	9·4	38·3	13·4	66·9	—	7·4	—	17·4	12·6
1950–54	18·7	10·5	46·1	14·3	74·2	—	8·4	—	14·4	9·5

* According to the classification in use at the time.

(1) Excludes Hodgkin's disease, Leukæmia and Aleukæmia.

(2) Includes palate, cheek (internal surface), salivary glands and gums; also includes Tonsil to 1949

(3) Includes tonsil for years 1950-54.

(4) Includes duodenum, small intestine, caecum, colon, hepatic, splenic and sigmoid flexures and intestine (undefined).

(5) Rectum only 1950–54 ; Anus Non-civilians 1940-49 and Anus 1950-54 included in skin.

(6) Includes face, nose, scalp, ear, neck, trunk, upper limb and lower limb : Anus included for years 1950-54 and anus non-civilians for years 1940-49.

(7) Includes lung, bronchus and pleura.

(8) Includes Ureter for years 1950-54.

(9) Excludes Ureter for years 1950–54.

(10) Includes skull, spinal column, rib, sternum, clavicle, scapula, pelvis, arm, leg (undefined).

Table LXVI.—Cancer: Age and sex specific death rates per million living for certain sites, 1911-20, 1921-30, 1931-39, 1940-44, 1945-49 and 1950-54

Period	Males											Females									
	0–	5–	15–	25–	0–34 E A D R	35–	45–	55–	0–64 E A D R	65–	75 and over	0–	5–	15–	25–	0–34 E A D R	35–	45–	55–	0–64 E A D R	65–	75 and over
ALL SITES* (I.S.C. Nos. 140–205)																						
1911–20 ..	Not available				57	424	1,665	4,333	1,019	7,691	9,208	Not available				64	787	2,222	4,257	1,152	6,786	8,512
1921–30 ..					60	420	1,618	4,666	1,064	9,063	11,994					67	762	2,115	4,172	1,121	7,220	10,236
1931–39 ..	43	23	50	129	64	448	1,602	4,592	1,056	9,782	14,090	37	18	40	155	66	713	2,015	3,968	1,066	7,147	11,094
1940–44 ..	88	61	82	169	102	542	1,762	4,711	1,134	9,906	14,162	70	41	61	192	94	714	2,025	3,908	1,073	6,892	10,445
1945–49 ..	102	64	93	182	111	572	1,943	5,014	1,218	10,071	14,554	88	44	64	186	97	698	1,936	3,786	1,040	6,756	10,723
1950–54 ..	110	67	100	178	114	575	2,074	5,525	1,319	10,594	16,397	97	54	65	191	102	703	1,841	3,624	1,004	6,430	11,020
PHARYNX (I.S.C. Nos. 145 part, 146–148)																						
1911–20	Not available				1	4	25	60	14	83	74	Not available				0	4	8	14	4	11	17
1921–30 ..					1	4	22	69	15	113	103					0	4	8	12	4	16	21
1931–39 ..	*0*	*0*	*1*	*1*	*1*	*3*	16	65	13	138	146	*0*	*0*	*1*	*1*	*1*	*2*	9	16	4	21	*21*
1940–44 ..	*0*	*0*	*1*	*1*	*1*	*4*	13	44	10	115	158	*0*	*0*	*0*	*1*	*0*	*3*	7	14	4	22	*22*
1945–49 ..	*0*	*1*	*1*	*1*	*1*	*3*	11	34	8	96	145	*0*	*0*	*0*	*1*	*0*	*2*	7	14	4	21	26
1950–54 ..	—	*1*	*2*	*1*	*1*	*4*	13	40	9	99	186	*0*	*0*	*0*	*2*	*1*	7	17	29	8	37	44
ŒSOPHAGUS (I.S.C. No. 150)																						
1911–20 ..	Not available				0	18	139	357	79	510	466	Not available				1	18	43	70	21	105	144
1921–30 ..					0	10	113	384	78	600	623					1	13	45	81	22	133	190
1931–39 ..	*0*	—	*0*	*1*	*0*	9	62	306	58	615	745	*0*	—	*0*	*1*	*0*	9	40	92	22	156	232
1940–44 ..	—	—	*0*	*2*	*1*	9	41	205	40	557	715	—	—	—	*1*	*0*	7	30	79	18	152	227
1945–49 ..	—	—	*0*	*2*	*1*	8	40	160	32	463	724	—	—	—	*1*	*0*	7	29	77	18	157	253
1950–54 ..	—	—	*0*	*1*	*0*	8	39	137	28	379	761	—	—	—	*2*	*1*	7	23	66	15	156	296

Table LXVI.—*continued.*

Period	Males											Females										
	0–	5–	15–	25–	0–34 EADR	35–	45–	55–	0–64 EADR	65–	75 and over	0–	5–	15–	25–	0–34 EADR	35–	45–	55–	0–64 EADR	65–	75 and over
STOMACH AND DUODENUM (I.S.C. Nos. 151, 152 part)																						
1911–20 ..	Not available				6	96	361	952	220	1,709	1,686	Not available)				4	74	255	663	155	1,268	1,457
1921–30 ..					7	114	407	1,067	248	2,040	2,311					5	73	253	681	158	1,489	1,952
1931–39 ..	*0*	*0*	*2*	22	7	115	424	1,082	253	2,171	2,684	*0*	*0*	*2*	17	5	71	228	631	146	1,481	2,226
1940–44 ..	*0*	*0*	*2*	18	6	112	406	1,062	246	2,088	2,620	*0*	*0*	*2*	20	6	62	206	580	134	1,321	2,027
1945–49 ..	—	*0*	*2*	18	6	106	383	1,060	241	2,108	2,686	—	—	*1*	14	4	61	180	517	119	1,278	2,111
1950–54 ..	*0*	*0*	*2*	15	5	90	353	973	220	2,052	2,970	*0*	*0*	*2*	13	4	51	162	440	103	1,158	2,281
LARYNX, TRACHEA (I.S.C. Nos. 161, 162 part, 165 part)																						
1911–20 ..	Not available				0	10	61	140	32	191	157	Not available				1	8	20	25	9	24	28
1921–30 ..					0	8	64	185	40	285	242					0	7	23	35	10	38	37
1931–39 ..	—	*0*	*0*	*1*	*0*	*7*	44	166	34	302	345	—	*0*	*0*	*1*	*0*	*6*	21	36	10	44	54
1940–44 ..	*0*	—	*0*	*1*	*0*	*6*	35	125	26	286	342	—	*0*	*0*	*1*	*0*	*6*	19	36	10	45	54
1945–49	—	—	*0*	*1*	*0*	*5*	30	111	23	247	326	*0*	—	*0*	*1*	*0*	*4*	15	35	8	46	61
1950–54 ..	—	*0*	*0*	*0*	*0*	*4*	25	92	19	202	345	*0*	—	—	*1*	*0*	*3*	10	19	5	31	38
LUNG, BRONCHUS AND PLEURA (I.S.C. Nos. 162 part, 163, 165 part)																						
1911–20 ..	Not available				3	13	34	64	19	76	42	Not available				1	8	20	34	10	42	28
1921–30 ..					3	29	73	128	37	136	92					1	10	25	50	14	60	51
1931–39 ..	*1*	*0*	*4*	18	6	83	271	455	128	450	306	*0*	*0*	*2*	*6*	2	21	53	108	29	149	128
1940–44 ..	*1*	*0*	*3*	24	8	129	453	866	227	799	498	*1*	*1*	*2*	8	3	27	72	140	39	205	183
1945–49 ..	*0*	*0*	*6*	26	9	159	678	1,376	345	1,414	803	*0*	*1*	*2*	10	4	34	88	185	49	288	257
1950–54 ..	*1*	*0*	*4*	26	9	175	867	2,122	491	2,542	1,571	*0*	*0*	*1*	10	3	40	109	232	60	357	388

*Excluding Hodgkin's disease, leukæmia and aleukæmia before 1940.

Table LXVII.—Cancer of certain sites: sex and age specific death rates per million living in four regional groups, Standard Regions, conurbations and aggregates summary (by type of area). England and Wales, 1954

	Males							Females						
	E.A.D.R. 0–34	35–	45–	55–	65–	75 and over	Crude Death Rate All ages	E.A.D.R. 0–34	35–	45–	55–	65–	75 and over	Crude Death Rate All ages
					ALL	SITES	(I.S.C.	Nos. 140 -205)						
ENGLAND AND WALES	**113**	**587**	**2,087**	**5,720**	**10,914**	**16,721**	**2,223**	**103**	**711**	**1,871**	**3,556**	**6,305**	**10,819**	**1,861**
Aggregates summary (by type of area)														
Conurbations	126	637	2,355	6,392	12,010	18,205	2,365	105	710	1,883	3,682	6,497	11,036	1,856
Areas outside conurbations														
Urban areas with populations of 100,000 and over	109	588	2,194	6,221	11,429	17,405	2,293	95	743	1,984	3,636	6,222	10,927	1,856
Urban areas with populations of 50,000 and under 100,000	113	524	2,022	5,531	10,575	15,000	2,153	111	767	1,725	3,644	6,151	11,000	1,947
Urban areas with populations under 50,000 ..	110	588	1,883	5,254	10,415	16,632	2,230	99	720	1,911	3,476	6,412	10,731	1,926
Rural Districts	96	506	1,723	4,667	9,447	14,960	1,934	106	660	1,775	3,289	5,911	10,377	1,765
NORTH OF ENGLAND	112	678	2,213	5,917	11,157	17,236	2,267	95	747	1,898	3,638	6,564	11,271	1,849
Regions														
Northern	103	662	2,038	5,762	10,423	16,705	2,105	92	732	1,986	3,526	6,927	11,246	1,756
East and West Ridings	111	678	2,079	5,680	11,313	17,945	2,279	103	759	1,836	3,781	6,657	11,382	1,886
North Western	118	685	2,382	6,140	11,418	17,048	2,342	92	746	1,898	3,599	6,354	11,211	1,870
Conurbations														
Tyneside	111	564	2,667	6,744	10,880	15,727	2,282	100	707	1,983	3,187	7,303	10,563	1,707
West Yorkshire	107	722	2,138	6,035	11,434	17,773	2,410	104	667	1,735	3,768	6,765	11,500	2,003
South East Lancashire	138	806	2,595	6,585	12,042	18,483	2,509	108	756	2,032	3,819	6,694	10,923	1,947
Merseyside	109	685	2,795	6,667	12,778	18,667	2,271	90	854	1,895	3,481	6,667	11,000	1,703
Aggregates summary (by type of area)														
Conurbations	120	727	2,517	6,467	11,855	17,922	2,400	102	746	1,914	3,661	6,780	11,066	1,877
Areas outside conurbations														
Urban areas with populations of 100,000 and over	120	822	2,337	6,282	12,180	17,748	2,414	94	800	2,058	3,789	6,233	11,421	1,848
Urban areas with populations of 50,000 and under 100,000	119	570	1,894	5,956	10,147	16,364	2,197	109	692	1,790	3,516	6,452	11,721	1,866
Urban areas with populations under 50,000 ..	102	618	1,935	5,302	10,880	17,370	2,237	81	800	1,856	3,590	6,548	11,433	1,856
Rural Districts	92	528	1,653	4,544	8,919	15,222	1,786	90	650	1,803	3,532	6,188	11,444	1,724

Table LXVII.—*continued.*

	Males							Females						
	E.A.D.R. 0–34	35–	45–	55–	65–	75 and over	Crude Death Rate All ages	E.A.D.R. 0–34	35–	45–	55–	65–	75 and over	Crude Death Rate All ages
					ALL	SITES	(I.S.C.	Nos. 140 -205)						
MIDLANDS AND EASTERN REGIONS ..	104	511	1,925	5,334	10,213	15,933	2,021	112	744	1,837	3,611	6,079	10,930	1,782
Regions														
North Midland	94	485	1,804	4,969	10,287	14,000	1,945	121	747	1,748	3,632	5,986	10,632	1,745
Midland	104	520	2,023	6,015	10,532	17,158	2,013	105	768	1,936	3,667	6,380	11,717	1,752
Eastern	118	525	1,918	4,830	9,771	16,482	2,112	111	707	1,796	3,519	5,815	10,378	1,861
Conurbation														
West Midlands	114	582	2,161	6,745	10,967	17,731	2,092	97	795	1,819	3,934	6,518	12,159	1,749
Areas outside conurbation														
Urban areas with populations of 100,000 and over	124	456	1,941	5,875	10,972	15,725	2,080	104	666	1,895	3,582	6,067	11,538	1,795
Urban areas with populations of 50,000 and under 100,000	92	518	2,218	4,728	10,669	13,742	1,917	127	947	1,566	3,902	5,835	11,155	1,770
Urban areas with populations under 50,000 ..	99	561	1,829	5,116	10,259	17,110	2,148	123	724	2,017	3,571	6,304	10,558	1,886
Rural Districts	100	444	1,719	4,453	9,127	14,826	1,864	113	695	1,741	3,319	5,660	10,107	1,703
SOUTH OF ENGLAND	124	561	2,100	5,807	11,174	16,930	2,314	103	659	1,852	3,448	6,137	10,426	1,917
Regions														
London and South Eastern	133	583	2,203	6,010	11,985	17,475	2,420	110	680	1,864	3,510	6,255	10,539	1,926
Southern	104	461	1,955	5,551	9,411	16,935	2,073	88	597	1,845	3,193	5,646	10,127	1,815
South Western	113	563	1,841	5,320	10,068	15,302	2,172	90	629	1,809	3,442	6,150	10,309	1,975
Conurbation														
Greater London	136	588	2,285	6,248	12,392	18,523	2,415	111	663	1,876	3,638	6,274	10,780	1,867
Areas outside conurbation														
Urban areas with populations of 100,000 and over	97	513	2,281	6,264	11,255	18,590	2,412	88	734	1,912	3,383	6,159	9,708	1,928
Urban areas with populations of 50,000 and under 100,000	135	453	1,926	5,642	10,928	15,533	2,347	102	643	1,754	3,520	6,142	10,499	2,187
Urban areas with populations under 50,000 ..	130	597	1,860	5,391	9,741	15,577	2,277	95	637	1,897	3,281	6,153	10,431	2,052
Rural Districts	97	501	1,739	4,873	9,728	14,917	2,024	96	635	1,732	3,085	5,720	9,928	1,808
WALES (including Monmouthshire)	86	622	2,038	5,712	10,920	16,293	2,285	106	741	1,995	3,625	7,065	11,298	1,899
Urban areas with populations of 100,000 and over	*58*	557	2,425	6,889	11,070	17,683	2,352	*84*	845	2,257	4,033	6,816	11,417	1,891
Urban area with population of 50,000 and under 100,000	*92*	*1,026*	*2,273*	9,677	*5,455*	*8,182*	2,260	—	*1,000*	*2,667*	*4,857*	*6,250*	*12,500*	2,066
Urban areas with populations under 50,000 ..	109	564	1,938	5,148	11,451	17,017	2,296	95	732	1,835	3,497	7,119	11,012	1,867
Rural Districts	*80*	721	1,846	5,274	10,722	15,489	2,221	152	636	1,986	3,408	7,147	11,420	1,941

Table LXVII.—*continued.*

	Males							Females						
	E.A.D.R. 0–34	35–	45–	55–	65–	75 and over	Crude Death Rate All ages	E.A.D.R. 0–34	35–	45–	55–	65–	75 and over	Crude Death Rate All ages
							Stomach (I.S.C. No. 151)							
ENGLAND AND WALES	**4**	**88**	**318**	**919**	**1,981**	**2,933**	**369**	**4**	**43**	**161**	**433**	**1,074**	**2,152**	**273**
Aggregates summary (by type of area)														
Conurbations	*3*	81	312	982	2,002	2,952	359	5	51	173	453	1,081	2,157	269
Areas outside conurbations														
Urban areas with populations of 100,000 and over	*5*	124	397	1,021	2,113	3,177	403	*5*	*27*	207	429	1,066	2,058	266
Urban areas with populations of 50,000 and under 100,000	*6*	89	335	920	1,840	2,673	362	*2*	*38*	158	433	931	2,161	275
Urban areas with populations under 50,000	*4*	97	299	876	1,987	2,845	382	*5*	47	163	419	1,150	2,071	287
Rural Districts	*4*	69	290	772	1,911	2,960	352	*3*	*32*	101	409	1,039	2,297	268
NORTH OF ENGLAND	*4*	110	346	1,042	2,230	3,368	410	*5*	44	210	505	1,302	2,473	307
Regions														
Northern	*8*	126	329	1,136	2,237	3,023	402	*7*	*53*	253	520	1,427	2,787	317
East and West Ridings	*4*	120	425	995	2,289	3,509	431	*6*	*52*	187	510	1,242	2,494	303
North Western	*3*	96	302	1,029	2,189	3,458	401	*4*	*34*	205	495	1,286	2,324	304
Conurbations														
Tyneside	*13*	*91*	509	1,359	2,160	2,909	439	*13*	*34*	*300*	437	1,576	2,750	320
West Yorkshire	*2*	*87*	390	941	2,245	3,409	423	*5*	*49*	*132*	464	1,099	2,775	311
South East Lancashire	*3*	*106*	272	1,017	2,181	3,586	395	*5*	*33*	202	516	1,396	2,596	327
Merseyside	—	*79*	307	1,267	2,278	3,000	362	*8*	*42*	295	481	1,140	2,036	264
Aggregates summary (by type of area)														
Conurbations	*4*	93	342	1,089	2,215	3,325	401	*7*	*39*	213	485	1,280	2,551	308
Areas outside conurbations														
Urban areas with populations of 100,000 and over	*7*	214	438	1,107	2,237	3,874	458	*9*	*33*	330	450	1,260	2,006	291
Urban areas with populations of 50,000 and under 100,000	*7*	*56*	*246*	1,066	2,141	3,312	399	*4*	*53*	*185*	519	1,266	2,459	310
Urban areas with populations under 50,000	*3*	124	364	1,056	2,343	3,102	435	*3*	*53*	198	544	1,386	2,327	314
Rural Districts	*4*	*81*	301	769	2,127	3,519	365	*2*	*50*	*108*	566	1,323	2,917	309

Table LXVII. —*continued.*

	Males							Females						
	E.A.D.R. 0–34	35–	45–	55–	65–	75 and over	Crude Death Rate All ages	E.A.D.R. 0–34	35–	45–	55–	65–	75 and over	Crude Death Rate All ages
							Stomach (I.S.C. No. 151)							
MIDLANDS AND EASTERN REGIONS ..	*4*	90	289	858	1,808	2,630	329	*4*	36	139	434	969	2,244	252
Regions														
North Midland	*4*	88	296	790	1,870	2,538	331	*6*	*25*	128	399	865	2,447	244
Midland	*3*	84	298	1,000	1,825	2,667	321	*4*	*48*	161	521	1,175	2,478	272
Eastern	*6*	103	268	745	1,725	2,679	338	*2*	*31*	120	360	629	1,833	234
Conurbation														
West Midlands	*5*	*85*	284	1,184	1,917	2,192	321	*5*	*87*	169	603	1,341	2,432	289
Areas outside conurbation														
Urban areas with populations of 100,000 and over	*4*	*78*	361	913	1,944	2,706	346	*6*	—	*118*	438	942	2,376	246
Urban areas with populations of 50,000 and under 100,000	*7*	*114*	302	798	1,915	2,258	318	—	*25*	*218*	325	802	2,112	223
Urban areas with populations under 50,000 ..	*4*	*101*	247	774	1,881	2,798	346	*3*	*36*	164	426	897	1,917	247
Rural Districts	*4*	*85*	278	701	1,564	2,771	314	*5*	*25*	*75*	355	866	2,403	244
SOUTH OF ENGLAND	*3*	65	297	794	1,754	2,669	335	*3*	42	140	360	868	1,786	243
Regions														
London and South Eastern	*3*	71	301	810	1,756	2,563	334	*3*	46	131	347	864	1,753	235
Southern	*4*	*56*	274	685	1,622	2,674	305	*4*	*22*	128	348	724	1,848	232
South Western	*1*	*51*	300	833	1,864	2,981	369	—	*49*	186	416	1,007	1,840	285
Conurbation														
Greater London	*3*	72	297	851	1,858	2,869	338	*3*	51	144	392	866	1,842	233
Areas outside conurbation														
Urban areas with populations of 100,000 and over	*3*	*72*	332	962	2,016	2,778	377	—	*39*	239	400	836	1,506	249
Urban areas with populations of 50,000 and under 100,000	*4*	*71*	426	830	1,538	2,589	364	*4*	*39*	*72*	400	693	1,900	272
Urban areas with populations under 50,000 ..	*3*	*70*	263	657	1,504	2,344	317	*4*	*35*	162	256	1,037	1,807	277
Rural Districts	*3*	*32*	262	668	1,702	2,579	317	*3*	*26*	*80*	338	783	1,722	224
WALES (including Monmouthshire)	*6*	122	432	1,288	2,839	3,878	535	*6*	*69*	128	526	1,776	3,158	369
Urban areas with populations of 100,000 and over	*6*	*145*	554	1,238	2,513	3,780	493	—	*70*	*66*	*414*	1,592	2,992	304
Urban area with population of 50,000 and under 100,000	—	*513*	*909*	*1,935*	*455*	*1,818*	*514*	—	—	*222*	*1,429*	*2,917*	*6,667*	689
Urban areas with populations under 50,000 ..	*8*	*94*	350	1,204	2,665	3,867	504	*15*	*92*	*73*	536	1,545	2,957	347
Rural Districts	*5*	*114*	412	1,393	3,538	4,211	611	—	*39*	*253*	535	2,147	3,295	430

Table LXVII.—*continued.*

	Males							Females						
	E.A.D.R. 0–34	35–	45–	55–	65–	75 and over	Crude Death Rate All ages	E.A.D.R. 0–34	35–	45–	55–	65–	75 and over	Crude Death Rate All ages
							Lung and bronchus (I.S.C. Nos. 162–163)							
ENGLAND AND WALES	**9**	**181**	**934**	**2,410**	**3,040**	**1,882**	**657**	**4**	**41**	**122**	**235**	**379**	**386**	**102**
Aggregates summary (by type of area)														
Conurbations	12	213	1,148	2,868	3,936	2,681	808	6	50	147	279	492	509	126
Areas outside conurbations														
Urban areas with populations of 100,000 and over	*10*	199	983	2,782	3,328	2,013	721	*1*	*47*	103	247	319	380	94
Urban areas with populations of 50,000 and under 100,000	*7*	160	822	2,265	2,764	1,519	601	*1*	*38*	105	245	384	280	98
Urban areas with populations under 50,000 ..	*6*	151	793	2,037	2,538	1,465	571	*2*	30	90	166	303	368	82
Rural Districts	*5*	144	665	1,743	2,024	1,248	453	*3*	*28*	123	212	283	231	81
NORTH OF ENGLAND	12	234	983	2,461	2,993	1,923	676	*4*	49	97	226	346	356	92
Regions														
Northern	*10*	179	906	2,272	2,134	1,295	541	—	*72*	*69*	166	339	344	76
East and West Ridings	*9*	247	880	2,325	3,180	2,000	670	*4*	*38*	75	219	309	303	82
North Western	15	251	1,086	2,637	3,296	2,205	748	*7*	45	123	256	371	394	106
Conurbations														
Tyneside	*4*	*182*	1,298	3,051	2,680	*1,364*	713	—	*34*	*50*	*250*	*394*	*563*	89
West Yorkshire	*9*	209	951	2,435	3,038	1,773	700	*7*	*57*	*59*	232	333	*225*	89
South East Lancashire	*26*	324	1,289	2,898	3,847	2,724	874	*8*	*67*	122	277	414	423	118
Merseyside	*15*	258	1,375	2,767	4,167	3,267	786	*11*	*62*	*158*	286	579	*393*	124
Aggregates summary (by type of area)														
Conurbations	16	261	1,213	2,762	3,522	2,364	787	*7*	59	102	263	422	375	108
Areas outside conurbations														
Urban areas with populations of 100,000 and over	*14*	325	1,024	2,828	3,728	2,207	786	—	*25*	*102*	249	322	*474*	92
Urban areas with populations of 50,000 and under 100,000	*4*	*236*	856	2,445	2,346	1,753	625	—	*53*	*74*	*252*	*353*	*246*	88
Urban areas with populations under 50,000 ..	*9*	156	778	1,981	2,486	1,266	553	*1*	*58*	99	125	257	371	74
Rural Districts	*6*	170	529	1,811	1,784	1,519	425	*5*	*17*	*83*	206	*213*	*222*	64

Table LXVII.—*continued.*

	Males							Females						
	E.A.D.R. 0–34	35–	45–	55–	65–	75 and over	Crude Death Rate All ages	E.A.D.R. 0–34	35–	45–	55–	65–	75 and over	Crude Death Rate All ages
	Lung and bronchus (I.S.C. Nos. 162-163)													
MIDLANDS AND EASTERN REGIONS ..	11	148	858	2,118	2,583	1,624	557	*2*	32	104	198	323	310	81
Regions														
North Midland	*11*	142	758	2,031	2,380	1,365	524	*2*	*25*	99	207	298	*250*	76
Midland	*12*	170	935	2,370	2,794	1,702	583	*2*	*29*	100	192	310	348	76
Eastern	*9*	121	859	1,882	2,541	1,786	557	*2*	*44*	116	196	363	322	94
Conurbation														
West Midlands	*15*	188	1,142	2,694	3,350	2,077	676	*5*	*31*	*94*	174	329	*250*	71
Areas outside conurbation														
Urban areas with populations of 100,000 and over	*13*	*128*	895	2,589	3,090	2,392	662	*2*	*28*	*104*	215	358	*385*	89
Urban areas with populations of 50,000 and under 100,000	*14*	*164*	840	2,004	2,553	1,355	531	—	*51*	*90*	*293*	*401*	*319*	96
Urban areas with populations under 50,000 ..	*8*	169	820	2,005	2,613	1,651	572	—	*16*	108	163	299	415	81
Rural Districts	*7*	104	665	1,571	1,833	1,101	408	*4*	*45*	114	202	291	*200*	79
SOUTH OF ENGLAND	6	164	966	2,618	3,501	2,125	729	*4*	42	157	276	456	465	128
Regions														
London and South Eastern	*7*	182	1,039	2,827	4,116	2,633	826	*5*	46	178	303	513	572	145
Southern	*3*	117	877	2,283	2,356	1,457	547	*3*	*43*	118	205	331	*215*	88
South Western	*3*	137	773	2,173	2,495	1,189	562	*1*	*24*	114	242	367	330	103
Conurbation														
Greater London	*9*	186	1,102	2,992	4,404	3,056	861	*5*	49	194	317	584	651	153
Areas outside counrbation														
Urban areas with populations of 100,000 and over	*5*	*154*	1,025	2,981	3,292	1,795	741	*3*	*88*	*110*	337	310	*360*	118
Urban areas with populations of 50,000 and under 100,000	*4*	*71*	798	2,189	3,289	1,472	638	*4*	*13*	*143*	*213*	409	*285*	113
Urban areas with populations under 50,000 ..	*2*	140	820	2,264	2,649	1,456	615	*4*	*25*	*86*	190	359	339	97
Rural Districts	*1*	158	725	1,876	2,383	1,317	510	*1*	*21*	145	244	321	299	98
WALES (including Monmouthshire)	6	163	792	2,038	2,264	1,220	545	*2*	*29*	*90*	158	234	*211*	63
Urban areas with populations of 100,000 and over	6	*194*	1,062	2,730	2,995	*854*	680	—	*70*	*88*	*110*	*204*	*157*	*56*
Urban area with population of 50,000 and under 100,000	—	*256*	*227*	*4,839*	*2,273*	*1,818*	822	—	—	*222*	—	—	—	*33*
Urban areas with populations under 50,000 ..	*7*	*121*	700	1,710	2,190	1,492	500	*3*	*13*	*36*	*208*	*251*	*350*	68
Rural Districts	*5*	*190*	753	1,741	1,913	*1,053*	484	—	*19*	*162*	*134*	*245*	*57*	64

Table LXVIII.—Cancer: Deaths by sex and age according to histological type, and death rates per million living, 1954

		All ages	0–	15–	35–	45–	55–	65 and over
		Number of deaths						
All malignant neoplasms (140–205)	M	47,313	397	844	1,786	6,394	12,046	25,846
	F	42,782	298	848	2,234	6,028	9,364	24,010
Carcinoma	M	41,670	21	307	1,292	5,492	10,746	23,812
	F	37,958	20	469	1,870	5,320	8,285	21,994
Glioma	M	682	45	61	100	194	208	74
	F	515	52	68	67	127	135	66
Sarcoma	M	920	88	148	95	119	160	310
	F	961	62	95	84	150	223	347
" Reticuloses "	M	2,422	233	306	250	389	498	746
	F	1,934	154	199	156	260	420	745
Undefined	M	1,619	10	22	49	200	434	904
	F	1,414	10	17	57	171	301	858
		Death rates per million persons living						
All malignant neoplasms (140–205) ..		2,035	70	140	650	1,976	4,518	9,859
Carcinoma		1,799	4	64	511	1,720	4.016	9,058
Glioma		27	10	11	27	51	72	28
Sarcoma		42	15	20	29	43	81	130
" Reticuloses "		98	39	42	66	103	194	295
Undefined		69	2	3	17	59	155	348

Table LXIX.—Cancer: Percentage of deaths from cancer of various sites to total deaths from cancer, by sex, 1931-39, 1940-49, and 1950-54

Site	1931–39		1940–49		1950–54	
	Male	Female	Male	Female	Male	Female
All Sites	**100**	**100**	**100**	**100**	**100**	**100**
All Sites (less lung and bronchus)	92·1	97·8	83·5	96·4	72·5	94·7
Lung and bronchus	7·9	2·2	16·5	3·6	27·5	5·3
Lip	0·9	0·1	0·5	0·1	0·3	0·0
Tongue	3·3	0·4	1·9	0·4	1·1	0·4
Mouth and Tonsil	2·6	0·4	1·4	0·3	0·9	0·4
Pharynx	1·3	0·3	0·9	0·3	1·2	0·8
Oesophagus	5·6	2·0	4·2	2·0	3·2	2·1
Stomach	22·2	16·6	20·7	15·8	18·3	15·6
Gall bladder	0·9	1·8	0·7	1·5	0·8	1·6
Intestine	13·4	15·1	12·8	15·5	9·8	13·9
Rectum and Anus*	10·8	6·2	10·4	6·6	7·9	6·0
Ovary and fallopian tube	—	4·6	—	5·5	—	6·2
Uterus	—	13·0	—	11·7	—	9·8
Breast	0·2	20·1	0·2	19·8	0·2	20·0
Penis	0·6	—	0·4	—	0·3	—
Scrotum	0·2	—	0·1	—	0·1	—
All Skin†	1·5	1·0	1·2	0·9	1·1	1·1
Larynx	2·9	0·7	2·3	0·7	1·7	0·5
Pancreas	3·2	2·7	3·5	3·0	3·8	3·6
Bladder	3·2	1·3	3·7	1·6	4·1	1·9
Prostate	5·9	—	6·8	—	7·1	—
Testis	0·5	—	0·5	—	0·5	—
Bones	1·5	1·1	1·4	1·1	1·0	0·9
Mediastinum	0·9	0·4	0·7	0·3	0·2	0·1
Kidney and Suprarenal	1·2	0·9	1·2	0·9	1·4	1·1

* Excluding Anus (non-civilians) 1940-49.

† Including Anus (non-civilians) 1940-49.

Table LXX.—Cancer mortality: International comparisons. Numbers of deaths, death rates per 100,000 living by sex and deaths from cancer of various sites per cent of total deaths from cancer; England and Wales and various countries

Country	Year	All sites: Crude Death Rates			All sites: No. of Deaths		Percentage of deaths from cancer of various sites to total cancer deaths: Buccal cavity and Pharynx		Digestive organs and peritoneum		Respiratory system		Uterus	Other female genital organs	Breast		Male genital organs	Urinary organs		Skin		Brain and other parts of nervous system		Other or unspecified organs		Proportion of persons aged 60 and over per 1,000 population
		Persons	Male	Female	M	F	M	F	M	F	M	F	F	F	M	F	M	M	F	M	F	M	F	M	F	Persons
England and Wales ..	1949	187·2	198·1	177·1	40,772	39,891	4·0	1·3	50·6	46·5	24·9	5·6	10·6	7·0	0·2	19·7	8·1	5·3	2·7	1·3	1·2	1·7	1·2	3·9	4·2	159
Germany ..	1949	160·5	158·6	162·1	34,743	40,787	1·2	0·5	64·3	54·0	14·2	3·0	17·0	4·3	0·2	11·3	6·8	4·2	1·8	1·0	1·2	1·2	0·8	6·9	6·1	129
Denmark ..	1949	156·8	147·9 (1948–49)	162·3	3,136	3,498	2·6	1·1	56·3	42·3	11·4	2·6	13·6	7·1	0·3	17·2	8·7	—	—	1·4	0·7	—	—	19·3	15·3	131
Scotland ..	1949	185·3	184·9 (1948)	177·5	4,702	4,885	5·1	1·6	53·5	51·9	22·1	5·9	9·3	5·5	0·04	16·8	7·8	4·8	2·8	1·1	0·9	1·8	1·3	3·7	3·9	144
Spain	1949	73·3	74·6 (1948–49)	70·7	10,147	10,405	3·7	1·1	54·0	50·0	14·7	3·7	13·3	1·1	—	8·0	6·0	3·9	1·6	1·8	2·2	0·3	0·4	15·6	18·6	101*
Finland ..	1949	125·7	126·7 (1947–48)	114·4	2,491	2,555	1·4	1·1	61·2	61·3	23·0	4·4	14·3		—	9·7	3·9	3·0	2·0	1·1	1·8	—	—	6·3	5·3	108
France.. ..	1949	168·0	169·4	166·6	33.410	35,905	4·0	0·8	57·6	50·7	13·0	3·4	12·0	2·3	0·2	11·1	7·0	3·0	1·9	2·0	2·0	0·4	0·3	12·8	15·5	163
Ireland (Repub. of)	1949	139·1	140·0 (1945–47)	129·2	2,214	1,947	7·6	2·2	58·9	52·0	10·3	3·4	8·3	2·7	0·3	17·2	7·5	2·6	1·8	3·6	2·9	0·7	0·6	8·6	8·9	146†
Italy	1949	103·0	102·8 (1948–49)	100·2	23,672	23,704	5·0	1·0	63·3	51·9	10·7	3·3	15·2	2·9	0·2	13·8	5·8	3·8	1·7	2·1	1·8	0·7	0·5	8·4	8·0	118
Netherlands ..	1949	140·6	138·4 (1948–49)	138·6	6,966	7,031	1·9	0·9	56·5	50·2	17·4	3·1	9·2	5·9	0·2	18·3	9·2	3·7	2·1	1·4	1·3	2·1	1·5	7·6	7·5	114
Norway ..	1949	147·4	133·1 (1946–47)	144·8	2,295	2,470	3·4	1·7	65·2	54·5	6·3	2·4	15·7		0·1	14·9	12·4	3·9	3·6	1·1	0·7	0·9	0·2	6·8	6·2	135
Portugal ..	1949	52·1	49·3	56·0	2.006	2,419																				
Sweden ..	1949	137·9	134·9 (1945–46)	149·2	4,525	5,064							16·9		0·2	15·9										
Switzerland ..	1949	180·3	189·0 (1947–48)	169·5	4,246	4,120	4·6	1·2	57·7	46·6	13·9	2·7	10·8	6·6	0·1	17·6	8·5	3·7	2·3	1·1	1·3	1·8	1·2	8·7	9·8	138
Union of South Africa (Whites)	1949	115·1			1,537	1,422	3·7	0·8	49·1	39·2	14·4	4·3	15·5	5·1	—	18·1	9·6	5·7	3·7	3·8	1·8	1·3	1·8	12·5	9·6	94†
Canada ..	1949	123·7	127·6 (1948)	125·2	8·759	7·973	5·5	1·3	52·3	42·6	12·9	3·8	13·7	5·4	0·2	19·6	11·6	6·5	3·8	1·5	1·4	2·8	2·2	6·5	6·3	111
Chile	1948	81·5	71·9 (1946–47)	87·1	2,073	2,513	1·3	0·4	71·9	57·7	9·4	2·9	20·8	2·1	—	4·2	6·0	2·3	1·1	0·6	0·8	0·2	0·7	8·3	9·2	59*
U.S.A. ..	1949	138·7	135·1 (1948)	134·6	104,032	102,293	3·9	1·0	43·5	36·2	15·2	3·6	15·9	6·1	0·2	17·9	11·6	6·2	3·4	2·0	1·4	2·3	1·5	15·2	13·0	116
Uraguay ..	1947	129·4			1,642	1,335	3·0	0·5	54·5	55·0	20·4	4·3	13·2	5·2	0·1	13·0	9·0	6·8	2·7	0·1	0·1	0·5	0·7	5·5	5·2	
Japan	1949	71·5			29,636	29,133	2·6	1·5	85·9	56·4	4·5	1·8	28·2	1·7	0·03	4·7	0·6	1·1	1·0	0·8	0·8	0·2	0·2	4·2	3·6	76
Australia (excl. aborigines)	1949	125·5	125·2 (1946–48)	123·3	5,013	4,917	5·0	0·9	52·3	43·9	13·5	2·9	12·9	6·9	0·2	19·9	12·4	5·8	3·1	3·3	2·5	1·2	1·0	6·3	6·0	125
New Zealand ..	1949	139·8			1,237	1,235	3·3	0·8	51·2	44·0	15·4	2·8	11·8	7·7	—	20·7	13·2	4·9	3·1	2·6	1·7	3·1	1·7	6·3	5·7	137

* Based on 1940 census.
† Based on 1946 census.

CARDIOVASCULAR DISEASES

In this section special attention is given this year to subacute bacterial endocarditis and pulmonary embolism. This is preceded by a brief review of mortality from cardiovascular diseases in general.

Deaths in 1954 assigned to diseases of the circulatory system (I.S.C. Nos. 400-468) numbered 186,309 of which 94,675 were of males and 91,634 were of females. Corresponding death rates per million were 4,447 for males and 3,987 for females, rates that were very close to those of the last few years. The male C.M.I. in 1954 was 1·08 indicating an 8 per cent increase in mortality compared with 1938, but little change from 1949 (Table LXXI, page 162). For females the C.M.I. in 1954 was 0·90, the lowest index recorded since 1948.

Amongst the various conditions included within the cardiovascular section those that have shown diminishing crude death rates since 1943, the period covered by Table LXXI, are rheumatic fever, chronic rheumatic heart disease, chronic endocarditis (non-rheumatic), other myocardial degeneration, and subacute endocarditis. Conditions which, on the basis of their crude death rates, show an upward tendency are arteriosclerotic (coronary) disease, hypertension, arteriosclerosis (females only), pulmonary embolism, and the two residual groups, other diseases of heart, and other circulatory diseases.

For the group comprising diseases of the heart (I.S.C. Nos. 410-443) the C.M.I. (persons) in 1954 was 0·98. Since 1940 C.M.I's for this group have been:

1940	1·13	1945	0·93	1950	1·07
1941	1·00	1946	0·95	1951	1·14
1942	0·93	1947	1·01	1952	1·00
1943	0·93	1948	0·92	1953	0·98
1944	0·93	1949	1·03	1954	0·98

Some increase in mortality from this group of causes occurred in 1951 in consequence of a fairly severe influenza epidemic. Moreover the changes in classification introduced in 1950 caused some temporary disturbance of the figures, particularly as regards hypertensive heart disease (I.S.C. Nos. 440-443), and to this may be attributed, at least to some extent, the high indices for 1950 and 1951.

Numbers of deaths and death rates by sex and age from the principal cardiovascular diseases in 1954 are given in Table LXXII (page 163). In view of their close association with the circulatory system, this table and the preceding one also include vascular lesions affecting the central nervous system (mainly cerebral hæmorrhage, embolism and thrombosis).

Amongst males aged 45-64, two-thirds of the deaths from cardiovascular causes were assigned to arteriosclerotic (coronary) disease, this disease contributing just over one fifth of the total male mortality at those ages. At ages 65-74, half of the male and over one third of female deaths from cardiovascular causes were attributed to coronary disease, but at ages 75 and over in both sexes the other forms of degenerative heart disease (e.g. non-rheumatic endocarditis, myocardial degeneration) came into greater prominence.

Of the total of 186,309 cardiovascular deaths recorded, about 95,000 were at ages 75 and over, with only a relatively small excess of the male rate (63 per 1,000) over the female rate (50 per 1,000).

At younger adult ages, however, there was a very large excess of male mortality. For example, at 45-64 the rate for males was 4·4 per 1,000 compared with 2 per 1,000 for females. This large difference arose mainly from the much greater susceptibility of males to coronary heart disease, the most serious and the most challenging health problem of Western countries at the present time. Evidence that this high mortality is due to socio-environmental causes of one kind or another, and is therefore potentially preventable, comes from the fact that there are considerable differences in the death rates from coronary disease between one social class and another, and also that some Western countries have apparently managed, at any rate up to the present, to escape the heavy burden of male mortality from this cause that other countries have suffered.

The following table, extracted from Table 5 of the 1951 Occupational Mortality analysis,* gives Standardised Mortality Ratios of men aged 20-64 by social class.

	All Classes	Social Class				
		I	II	III	IV	V
1930–32	100	237	148	95	66	67
1950	100	150	110	104	79	89

The table below gives death rates per 100,000 men and women aged 60-64 from arteriosclerotic and degenerative heart diseases (I.S.C. Nos. 420-422) in 1952 in a number of countries. Compared with the United Kingdom, the British Dominions, and the United States, much lower rates, particularly for men, were recorded in Denmark, Netherlands and Norway. International differences of this kind must always be read cautiously, but in the present instance it is probable that the statistics reflect a true difference in the levels of mortality from those forms of heart disease between the two groups of countries.

	Male	Female	Male/Female Ratio
England and Wales	725	280	2·6
Scotland	996	438	2·3
Northern Ireland	876	398	2·2
Australia	1,024	386	2·7
Canada	943	402	2·3
New Zealand	863	338	2·6
United States	1,099	424	2·5
Denmark	460	244	1·9
Netherlands	388	206	1·9
Norway	366	172	2·1

Source : W.H.O. Annual Epidemiological and Vital Statistics 1952, p. 309 and p. 346.

Regional and urban-rural death rates from several cardiovascular cases at ages 55-74 are set out in Table LXXIII (page 164). Mortality from rheumatic and other endocarditis was high in Wales. Mortality from arteriosclerotic (coronary) heart disease was a little higher in urban areas than rural districts and was higher in the three northern regions and their conurbations than in those of the Midlands and South of England. Differences were much greater for myocardial degeneration with rates twice as high in the North Western region as in the London and South Eastern region. The South Western region

* Registrar General's Decennial Supplement, England and Wales, 1951—Occupational Mortality, Part I. H.M.S.O. price 7*s.* 6*d.* net.

and Wales both had rates above average. Amongst males there was a regular urban-rural gradient of mortality from hypertension that was not shown either amongst females or in the mortality from vascular lesions affecting the central nervous system. From the latter cause, death rates were considerably lower in Greater London than in the other conurbations.

Acute and Subacute Endocarditis (mainly subacute bacterial endocarditis).

Deaths from acute or subacute bacterial endocarditis and synonyms are assigned to No. 430·0 of the International Statistical Classification (6th Revision). No. 430·1 comprises " other acute endocarditis ". Of the total 316 deaths assigned to I.S.C. No. 430 in 1954, 310 were assigned to No. 430·0 and only 6 to No. 430·1. Deaths from " acute and subacute endocarditis " are, therefore, mainly from subacute bacterial endocarditis.

The trend of numbers of deaths from acute and subacute endocarditis (I.S.C. No. 430) from 1940 is shown in the table below.

Year	M	F	Year	M	F
1940	520	456	1948	302	223
1941	504	480	1949	256	215
1942	470	520	1950	232	167
1943	486	495	1951	212	158
1944	434	442	1952	182	133
1945	386	323	1953	199	140
1946	333	277	1954	198	118
1947	349	250			

During the initial few years there were approximately 500 deaths per annum in each sex. A gradual decline set in in 1944 with the introduction of antibiotic therapy and this decline has continued. Improvement has been greater amongst females. Deaths of males in 1954 numbered 198, less than half the total of 520 in 1940, and the figure has not improved since 1952. Deaths of females in 1954 numbered 118, the lowest total to date, and compared with 456 in 1940. In terms of crude death rates, a male rate of 24 per million during 1940-43 declined to 9 per million in 1954, and a female rate of 22 per million in 1940-43 declined to 5 per million. Comparative mortality indices in 1954 were: males 0·32; females 0·19.

The distribution by sex and age of the 316 deaths from acute and subacute endocarditis in 1954 was as follows:

	All ages	0–	15–	45–	65 and over
Males					
Number	198	7	68	83	40
Rate per million	9	1	8	16	20
Females					
Number	118	5	47	43	23
Rate per million	5	1	5	7	8

In contrast with mortality in 1940, shown in the next table (in accordance with the classification then in use), there has not only been a reduction in the mortality at each age but there has also been a substantial relative transfer of mortality from younger to older ages.

Year 1940	All ages	0–	15–	45–	65 and over
Males					
Number	504	33	281	149	41
Rate per million	25	8	29	34	25
Females					
Number	450	37	281	99	33
Rate per million	21	9	28	19	15

In accordance with the international rules for the assignment of causes of deaths, deaths are only assigned to a particular cause, e.g., subacute bacterial endocarditis, when that condition, or a synonym, is reported as the " underlying cause of death ", that is to say, is shown in the lowest position in Part I of the medical certificate of cause of death, no cause of the endocarditis being mentioned. This means that a number of deaths certified as due to subacute bacterial endocarditis may be assigned to an underlying pathological process. That a considerable number of deaths from acute and subacute endocarditis were being lost from statistical view in this way was suggested by the 10 per cent sample multiple cause analysis of January-June, 1951 (Text volume, 1951, page 254); 26 death certificates showed this condition as the underlying cause (with assignment, therefore, to I.S.C. No. 430) but a further 37 certificates showed the condition as a complication and a further 2 certificates showed it as an associated condition.

To investigate the position in more detail arrangements were made for all certificates received from May to December, 1954, with mention of subacute bacterial endocarditis or synonym (terms listed under I.S.C. No. 430·0), to be specially examined. The results of this analysis, which was carried out in collaboration with the W.H.O. Centre for Classification of Disease, are set out below.

Terms in I.S.C. No. 430.0	Certificates: Doctors: Terms entered in Pt. I	Certificates: Doctors: Terms entered in Pt. II	Certificates: Coroners	Total
(i) Deaths assigned to I.S.C. No. 430.0				
Unspecified cause	142	—	25	167
With mention of rheumatism, rheumatic fever, rheumatic heart disease ..	13	2	—	15
With mention of congenital heart disease	4	3	—	7
Other specified cause	—	—	1	1
Total	**159**	**5**	**26**	**190**
(ii) Deaths with mention of I.S.C. No. 430.0, assigned elsewhere				
Assigned to acute rheumatic heart disease	5	—	—	5
Assigned to chronic rheumatic heart disease	41	5	5	51
Assigned to congenital heart disease ..	14	—	—	14
Assigned to other heart disease	25	2	2	29
Assigned elsewhere	16	8	6	30
Total	**101**	**15**	**13**	**129**

Of the 319 certificates with mention of subacute bacterial endocarditis, 190 showed this as underlying cause and were assigned accordingly. Of these, 15 had mention of rheumatic heart disease and 7 mentioned congenital heart disease.

Of the 129 other certificates not assigned to subacute bacterial endocarditis, the underlying condition was reported in 5 cases as acute and in 51 cases as chronic rheumatic heart disease. There were 14 deaths assigned to congenital heart disease, 29 to other forms of heart disease, and 30 to other conditions.

It may be concluded from this special analysis that the existing provisions in the International Statistical Classification for subacute bacterial endocarditis are not wholly satisfactory. Many deaths due to this disease are being assigned to other, underlying, conditions when these are known and mentioned, and the total of deaths actually being assigned to subacute bacterial endocarditis are only those where the certifier has been unable, or has not considered it appropriate, to state an underlying disease. There is no reason to believe, though, that this difficulty in classification is to any extent biassing the downward trend that has been recorded in the annual numbers of deaths that are being assigned to the disease.

Pulmonary Embolism and Infarction

Deaths from pulmonary embolism and infarction are assigned to No. 465 of the International Statistical Classification (Sixth Revision). Deaths from this cause annually since 1940 are shown in the following table:—

Year	M	F	Year	M	F
1940	117	154	1948	229	234
1941	130	142	1949	285	312
1942	108	122	1950	308	333
1943	114	130	1951	335	324
1944	170	132	1952	316	360
1945	127	144	1953	377	428
1946	177	205	1954	413	433
1947	225	216			

Deaths have increased from about 120 per annum for males during 1940-43 to 413 in 1954, and for females from about 140 per annum to 433 in 1954. The death rates both of males and females in 1940-43 averaged 6 per million compared with 19 per million in 1954.

The rates are equal in the two sexes, and the increase in each sex has been the same. It has been a gradual increase beginning in 1946 and continuing fairly steadily since then, the rates in 1954 being the highest yet recorded.

The following two tables compare the distribution of deaths by sex and age in 1954 with 1940 (according to classification then in use):

Year 1954	All ages	0–	15–	45–	65 and over
Males					
Number	413	5	17	127	264
Rate per million	19	1	2	25	130
Females					
Number	433	2	26	123	282
Rate per million	19	0	3	21	93

Year 1940	All ages	0–	15–	45–	65 and over
Males					
Number	117	1	16	48	52
Rate per million	6	0	2	11	32
Females					
Number	154	—	8	69	77
Rate per million	7	—	1	13	35

The increase in mortality rates since 1940 has been greatest at advanced ages, particularly amongst males. In 1940 there was a slight excess of female over male mortality at ages over 45, but in 1954 this was replaced by a male excess.

The difficulty in classification referred to above in connection with subacute bacterial endocarditis, whereby only a proportion of the deaths from that cause are so assigned, is greater still with pulmonary embolism. In the 10 per cent sample multiple cause analysis of January to June, 1951, deaths assigned to I.S.C. No. 465, pulmonary embolism and infarction, as underlying cause numbered 32, but there were 230 further certificates with mention of this condition but assigned elsewhere. In 199 cases the pulmonary embolism or infarction was reported as the complication of an underlying cause, and in 31 cases it was shown as an associated condition.

A special examination has therefore been carried out, on lines similar to that for subacute bacterial endocarditis, and again in collaboration with the W.H.O. Centre for Classification of Diseases, of all certificates received between May and December, 1954, on which pulmonary embolism or infarction, or a synonym, was mentioned. These certificates numbered 3,754 and are analysed in the following table.

Terms in I.S.C. No. 465	Certificates			Total
	Doctors		Coroners	
	Terms entered in Pt. I	Terms entered in Pt. II		
(i) Deaths assigned to I.S.C. No. 465				
N.O.S.	412	1	86	499
" Post-operative "	9	—	—	9
Total	**421**	**1**	**86**	**508**
(ii) Deaths with mention of I.S.C. No. 465, assigned elsewhere				
Assigned to specified operation	681	22	92	795
Assigned to diseases of veins as underlying cause	490	4	207	701
Assigned to other underlying causes ..	1,150	150	450	1,750
Total	**2,321**	**176**	**749**	**3,246**

There were 508 certificates upon which either no underlying cause of the pulmonary embolism was mentioned, or it was described as post-operative, and these were assigned to I.S.C. No. 465, pulmonary embolism and infarction. Deaths with mention of pulmonary embolism, &c., but with some other condition shown as underlying cause, numbered 3,246, i.e., more than six times as many. Of these, 795 had mention of a specified operation and the deaths were assigned to the disease necessitating the operation; 701 were reported as due to diseases of veins, e.g. thrombophlebitis; and 1,750 were due to other causes.

It is clear, therefore, that the deaths actually assigned to pulmonary embolism and infarction under the existing procedure represent only a small proportion (14 per cent) of the deaths in which the disease played a part. As with subacute bacterial endocarditis, however, it is improbable that this difficulty in classification in any way accounts for the recent trend of mortality. The explanation of this has still to be found.

Tables LXXI.—Diseases of the circulatory system and vascular lesions affecting the central nervous system: Death rates per million living, by sex, 1943 to 1954

Abbreviated List No.	Detailed List No.	Cause of death		1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
B 24	400–402	Rheumatic fever	M.	25	28	25	19	18	18	15	12	8	7	7	7
			F.	29	26	24	19	19	20	17	14	9	8	7	6
B 25	410–416	Chronic rheumatic heart disease	M.	241	260	246	208	203	181	181	201	194	164	157	148
			F.	294	290	286	272	272	257	270	306	298	247	240	237
B 26	420	Arteriosclerotic heart disease, including coronary disease	M.	954	1,065	1,137	1,129	1,245	1,264	1,453	1,640	1,757	1,847	1,837	1,991
			F.	396	425	466	522	586	652	765	885	937	982	995	1,066
	421	Chronic endocarditis not specified as rheumatic	M.	202	200	182	150	132	106	112	72	62	71	69	78
			F.	150	148	138	123	114	97	95	54	45	61	57	62
	422	Other myocardial degeneration	M.	1,950	2,020	2,004	1,821	1,890	1,559	1,728	1,555	1,648	1,388	1,312	1,256
			F.	1,802	1,798	1,881	1,921	2,026	1,772	2,071	1,965	2,082	1,733	1,707	1,626
B 27	430	Acute and subacute endocarditis	M.	28	25	21	16	16	14	12	11	10	9	9	9
			F.	23	20	15	13	11	10	10	7	7	6	6	5
	431–434	Other diseases of heart	M.	127	123	119	104	103	86	107	111	149	146	160	180
			F.	119	115	119	117	120	109	122	128	158	155	166	173
B 28, 29	440–447	Hypertension with or without mention of heart disease	M.	338	354	358	348	375	351	389	445	476	427	436	444
			F.	253	260	269	293	331	324	388	452	480	436	445	467
B 46 Pt.	450	General arteriosclerosis	M.	272	285	279	264	279	239	259	269	287	252	247	248
			F.	196	194	207	224	235	214	249	260	280	250	256	252
	465	Pulmonary embolism and infarction	M.	7	10	7	9	11	11	14	15	16	15	18	19
			F.	6	6	7	9	10	10	14	15	14	16	19	19
	Rem. of 451–468	Other circulatory diseases	M.	53	59	60	53	49	50	54	47	46	58	61	67
			F.	56	55	54	56	58	58	65	59	53	64	65	73
	400–468	**Diseases of the circulatory system**	**M.**	**4,195**	**4,429**	**4,437**	**4,121**	**4,320**	**3,879**	**4,325**	**4,378**	**4,652**	**4,384**	**4,313**	**4,447**
			F.	**3,322**	**3,337**	**3,465**	**3,570**	**3,780**	**3,522**	**4,068**	**4,143**	**4,363**	**3,957**	**3,963**	**3,987**
		Comparative Mortality Index	M.	*0·95*	*0·97*	*0·96*	*0·98*	*1·06*	*0·97*	*1·07*	*1·09*	*1·16*	*1·08*	*1·06*	*1·08*
			F.	*0·91*	*0·90*	*0·91*	*0·93*	*0·97*	*0·89*	*1·01*	*1·01*	*1·06*	*0·94*	*0·93*	*0·90*
B 22	330–334	**Vascular lesions affecting the central nervous system**	**M.**	**1,290**	**1,365**	**1,381**	**1,249**	**1,284**	**1,125**	**1,228**	**1,284**	**1,378**	**1,381**	**1,356**	**1,433**
			F.	**1,307**	**1,344**	**1,374**	**1,440**	**1,524**	**1,413**	**1,544**	**1,656**	**1,732**	**1,761**	**1,716**	**1,811**

Table LXXII.—Diseases of the circulatory system and vascular lesions affecting the central nervous system: Deaths and death rates per million living, and per 100 deaths from all circulatory diseases, by sex and age, 1954

Abbreviated List No.	Cause of death		0–	15–	25–	45–	65–	75 and over	All ages	0–	15–	25–	45–	65–	75 and over	All ages
			Males							Females						
B 24	Rheumatic fever	Deaths	39	25	42	27	11	8	152	38	17	42	26	12	12	147
		Rates	7·7	9·2	6·7	5·2	8·0	12·4	7·1	7·8	6·0	6·5	4·4	6·2	11·1	6·4
		Per cent	*42·4*	*14·0*	*1·7*	*0·1*	*0·0*	*0·0*	*0·2*	*41·8*	*9·8*	*2·5*	*0·2*	*0·1*	*0·0*	*0·2*
B 25	Chronic rheumatic heart disease	Deaths	18	92	632	1,275	666	461	3,144	19	88	945	2,132	1,214	1,054	5,452
		Rates	3·5	33·9	101	247	483	715	148	3·9	31·2	147	364	623	972	237
		Per cent	*19·6*	*51·4*	*25·1*	*5·6*	*2·3*	*1·1*	*3·3*	*20·9*	*50·9*	*56·4*	*18·5*	*5·1*	*1·9*	*5·9*
B 26	Arteriosclerotic heart disease	Deaths	—	9	1,212	15,055	14,836	11,275	42,387	—	1	177	4,331	9,269	10,736	24,514
		Rates	—	3·3	193	2,913	10,751	17,481	1,991	—	0·35	27·6	740	4,758	9,904	1,066
		Per cent	—	*5·0*	*48·1*	*66·0*	*51·6*	*27·9*	*44·8*	—	*0·6*	*10·6*	*37·6*	*38·9*	*19·7*	*26·8*
	Degenerative heart disease	Deaths	7	14	148	2,326	6,851	19,049	28,395	7	9	122	1,853	6,974	29,842	38,807
		Rates	1·4	5·2	23·5	450	4,964	29,533	1,334	1·4	3·2	19·0	316	3,580	27,530	1,688
		Per cent	*7·6*	*7·8*	*5·9*	*10·2*	*23·8*	*47·2*	*30·0*	*7·7*	*5·2*	*7·3*	*16·1*	*29·3*	*54·9*	*42·4*
B 27	Other diseases of heart	Deaths	7	9	59	83	28	12	198	5	17	30	43	16	7	118
		Rates	1·4	3·3	9·4	16·1	20·3	18·6	9·3	1·0	6·0	4·7	7·3	8·2	6·5	5·1
		Per cent	*7·6*	*5·0*	*2·3*	*0·4*	*0·1*	*0·0*	*0·2*	*5·5*	*9·8*	*1·8*	*0·4*	*0·1*	*0·0*	*0·1*
B 28	Hypertension with heart disease	Deaths	—	3	61	1,186	2,004	2,285	5,539	—	3	46	980	2,155	3,290	6,474
		Rates	—	1·1	9·7	229	1,452	3,543	260	—	1·1	7·2	167	1,106	3,035	282
		Per cent	—	*1·7*	*2·4*	*5·2*	*7·0*	*5·7*	*5·9*	—	*1·7*	*2·7*	*8·5*	*9·1*	*6·1*	*7·1*
B 29	Hypertension without heart disease	Deaths	—	7	143	993	1,236	1,533	3,912	3	8	114	756	1,272	2,100	4,253
		Rates	—	2·6	22·7	192	896	2,377	184	0·62	2·8	17·8	129	653	1,937	185
		Per cent	—	*3·9*	*5·7*	*4·4*	*4·3*	*3·8*	*4·1*	*3·3*	*4·6*	*6·8*	*6·6*	*5·3*	*3·9*	*4·6*
B 46(Pt.)	Other circulatory diseases	Deaths	12	12	115	991	1,853	4,135	7,118	9	22	126	752	1,693	5,289	7,891
		Rates	2·4	4·4	18·3	192	1,343	6,411	334	1·9	7·8	19·6	128	869	4,879	343
		Per cent	*13·0*	*6·7*	*4·6*	*4·3*	*6·5*	*10·2*	*7·5*	*9·9*	*12·7*	*7·5*	*6·5*	*7·1*	*9·7*	*8·6*
	All circulatory diseases	Deaths	**92**	**179**	**2,522**	**22,803**	**28,726**	**40,353**	**94,675**	**91**	**173**	**1,676**	**11,529**	**23,802**	**54,363**	**91,634**
		Rates	**18·1**	**65·9**	**401**	**4,411**	**20,816**	**62,563**	**4,447**	**18·7**	**61·3**	**261**	**1,969**	**12,219**	**50,150**	**3,987**
		Per cent	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*
B 22	Vascular lesions affecting central nervous system	Deaths	36	55	511	6,107	9,929	13,878	30,516	23	35	564	6,649	12,399	21,956	41,626
		Rates	7·1	20·3	81·3	1,181	7,195	21,516	1,433	4·7	12·4	87·9	1,136	6,365	20,255	1,811

Table LXXIII.—Death rates per million living by sex at ages 55-74 from selected diseases of the circulatory system and from vascular lesions affecting the central nervous system: in standard regions, conurbations and aggregates summary (by type of area) 1954

	Chronic rheumatic heart disease and other chronic endocarditis (410–416, 421)		Arteriosclerotic heart disease (420)		Myocardial degeneration (422)		Hypertension with or without heart disease (440–447)		Vascular lesions affecting the central nervous system (330–334)	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
ENGLAND AND WALES	**647**	**654**	**7,147**	**2,793**	**2,222**	**1,710**	**1,393**	**1,031**	**4,128**	**3,764**
Aggregates summary (by type of area):										
Conurbations	692	717	7,336	2,806	1,828	1,447	1,472	1,078	3,976	3,490
Areas outside conurbations										
Urban areas with populations of 100,000 and over	637	604	7,648	2,854	2,219	1,729	1,523	1,018	4,304	3,831
Urban areas with populations of 50,000 and under 100,000	563	608	7,515	2,766	2,354	1,599	1,336	826	3,914	3,872
Urban areas with populations under 50,000	593	611	7,286	2,848	2,605	1,893	1,323	1,022	4,606	4,070
Rural Districts	662	632	6,180	2,668	2,469	2,073	1,262	1,044	3,842	3,871
Regions*										
Northern	570	669	8,020	3,843	2,402	2,064	1,328	1,241	4,906	4,401
East and West Ridings	530	762	8,076	3,459	2,427	2,134	1,290	1,045	4,753	4,125
North Western	669	677	7,855	2,919	2,949	2,314	1,488	1,043	4,867	4,501
North Midland	581	551	6,256	2,701	2,459	1,698	1,393	1,006	4,115	3,823
Midland	684	701	6,399	2,518	2,626	1,820	1,482	1,148	4,141	3,898
Eastern	649	543	6,405	2,597	1,664	1,445	1,046	979	3,618	3,469
London and South Eastern	688	668	6,916	2,516	1,480	1,102	1,414	946	3,329	2,991
Southern	571	531	6,959	2,625	1,949	1,389	1,235	833	3,760	3,285
South Western	684	561	6,743	2,475	2,692	1,920	1,605	1,042	4,182	3,763
Wales (including Monmouthshire)	744	795	7,795	2,834	2,434	2,046	1,507	1,243	4,639	4,637
Conurbations:										
Tyneside	563	630	8,328	3,667	1,813	1,605	1,563	1,284	4,984	4,395
West Yorkshire	652	829	9,123	3,927	2,449	2,067	1,348	1,202	5,094	4,212
South East Lancashire	732	741	7,274	2,688	2,858	2,560	1,337	1,060	5,058	4,669
Merseyside	719	604	8,094	3,045	2,427	1,440	1,823	1,149	4,281	3,657
West Midlands	671	738	6,278	2,350	2,266	1,631	1,734	1,286	4,304	3,665
Greater London	702	706	7,016	2,584	1,187	913	1,411	976	3,180	2,817

* Including conurbations.

ACCIDENTAL AND VIOLENT DEATHS

There were 12,630 male and 8,239 female deaths in 1954 from accidental and violent causes, compared with an annual average of 12,169 male and 7,159 female deaths during 1950 to 1953. Table LXXIV (page 170) shows that accidental and violent deaths as a percentage of all causes continued to increase for both males and females in 1954, in each age-group except that of children aged 0-14 years.

Table LXXV (page 171) shows that the death rate per million living from violent causes increased in 1954 as compared with 1953. This was due to increases at ages 35 and over for men and 15 and over for women. The rate for men aged 20-24, however, continued to show a reduction from 643 in 1952 to 603 in 1953 and 580 in 1954. The rates for children under 15 continued to fall except for a slight rise for boys between 10 and 15.

Accidental falls, suicides and motor vehicle accidents were the most frequent causes of violent death, and the rates for these were all higher in 1954 than in 1953. The crude death rates per million living from these and some other accidental and violent causes during 1950 to 1954 were as follows:—

Cause of Death and I.S.C. No.		1950	1951	1952	1953	1954
All Violent and Accidental Causes (E800-E999)	M	562	591	568	582	593
	F	308	321	298	329	358
Motor vehicle accidents (E810-E835)	M	151	161	149	158	161
	F	46	49	42	45	51
Other road vehicle accidents (E840-E845)	M	14	11	11	9	9
	F	4	3	3	3	3
Accidental poisoning by gases and vapours (E890-E895)	M	10	12	12	15	15
	F	11	13	13	14	17
Accidental falls (E900-E904)	M	74	86	79	84	99
	F	113	117	105	123	141
Accidental mechanical suffocation (E921-E925)	M	23	23	22	19	23
	F	14	14	13	13	13
Accidental drowning and submersion (E929)	M	36	36	34	34	30
	F	9	9	8	8	8
Suicide and self-inflicted injury (E970-E979)	M	136	135	132	142	149
	F	70	72	68	76	81

The deaths from accidental falls in 1953 and 1954 have been affected by a change in procedure described on page 170.

Deaths in transport accidents

The numbers of deaths in transport accidents and the death rates per million living at all ages during 1950 to 1954 were as follows:—

Type of Transport accident (and I.S.C. No.)		1950		1951		1952		1953		1954	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Railway (E800–E802)	M.	331	16	301	14	390	18	342	16	249	12
	F.	38	2	33	1	59	3	25	1	31	1
Motor vehicle (E810–E835)	M.	3,187	151	3,396	161	3,147	149	3,342	158	3,423	161
	F.	1,043	46	1,114	49	970	42	1,033	45	1,166	51
Other road vehicle (E840–E845)	M.	294	14	238	11	229	11	181	9	198	9
	F.	95	4	68	3	76	3	66	3	60	3
Water transport (E850–E858)	M.	186	9	145	7	137	6	147	7	127	6
	F.	3	*0*	8	*0*	7	*0*	6	*0*	5	*0*
Aircraft (E860–E866)	M.	230	11	273	13	291	14	190	9	222	10
	F.	10	*0*	23	1	20	1	2	*0*	3	*0*

Motor and other vehicle accidents

Motor vehicle accidents on public highways caused the deaths of 3,289 males and 1,158 females in 1954, an increase of 2 per cent for males and 13 per cent for females on the numbers for 1953. In addition, 134 males and 8 females were killed in accidents involving motor vehicles but not on public highways, and 198 males and 60 females died of accidents in which other road vehicles were concerned. The crude death rates per million living are shown in the table above.

Table LXXVI (page 172) shows the death rates from motor vehicle accidents at different ages. Rates for both boys and girls under 15 were lower than in 1953. Male rates increased in each age-group from 15- onwards. At ages 20-24 the male rate was nearly nine times the female rate and was only exceeded by that for males aged 75 and over. Among women the rates from age 25 upwards were higher than those for 1953, with the exception of age-group 45-54.

Death rates in the standard regions and urban/rural aggregates based on the area of usual residence of the deceased are shown in Table LXXVII (page 173). Of the latter, Greater London had the lowest rates for males under 65. Death rates of girls and women under 45 were also lowest in Greater London. For men aged 15-44 the rate of 282 in rural districts was more than double that of 131 in Greater London. The regional figures showed considerable variation. The North Western Region showed a rise from 284 in 1953 to 401 in 1954 for men aged 65 and over.

Table LXXVIII (page 174) shows the numbers of deaths from motor and road vehicle accidents according to the type of road-user killed. There were 1,313 male and 842 female deaths of pedestrians in 1954, 183 more than in 1953. Deaths of motor cyclists increased from 1,050 to 1,057 for males but decreased from 96 to 70 for females.

Aircraft accidents

There were 222 male and 3 female deaths in 1954 due to aircraft accidents, compared with 190 male and 2 female deaths in 1953. Deaths due to accidents to personnel in military aircraft increased from 175 to 194. 87 of these occurred among young men aged 20-24.

Accidental poisoning

During 1954, 150 males and 165 females died of accidental poisoning by solids and liquids and a further 326 males and 391 females of accidental poisoning by gases and vapours. As will be seen from the following table, most of the cases of gas or vapour poisoning were due to illuminating gas.

	1949		1950		1951		1952		1953		1954	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
All solids and liquids (E870–E888)												
Number	93	101	113	142	121	143	154	141	136	152	150	165
Barbituric acid (E871)												
Number	27	50	47	80	40	77	61	79	84	85	67	117
Per cent of all solids and liquids ..	*29*	*50*	*42*	*56*	*33*	*54*	*40*	*56*	*62*	*56*	*45*	*71*
All gases and vapours (E890–E895)												
Number	229	235	208	255	252	304	246	302	322	322	326	391
Illuminating gas (E890)												
Number	195	226	158	248	215	300	203	295	279	312	280	380
Per cent of all gases and vapours ..	*85*	*96*	*76*	*97*	*85*	*99*	*83*	*98*	*87*	*97*	*86*	*97*

Among women, deaths from barbituric acid poisoning, which had since 1950, been a fairly stationary proportion of deaths from all poisonous solids and liquids, increased sharply in 1954 both in number and in proportion to the other

forms of poisoning. On the other hand the number and proportion for males, which had been increasing, fell. The deaths from illuminating gas are discussed further on page 170.

The total number of deaths from barbiturate poisoning continues to rise. A comprehensive study of the 1954 figures has recently been published.*

Suicides

In 1954, 3,178 males and 1,865 females committed suicide. In total, this is about the same as the number of deaths from road vehicle accidents. The numbers of suicidal deaths in the years 1949 to 1954 and the crude death rates were as follows:—

	1949	1950	1951	1952	1953	1954
Males						
Numbers	3,053	2,885	2,831	2,788	3,020	3,178
Rates per million	144	136	135	132	142	149
Females						
Numbers	1,697	1,586	1,638	1,550	1,734	1,865
Rates per million	75	70	72	68	76	81

The crude death rate in 1954 was the highest for both males and females since 1949.

Suicide rates in England and Wales per million living are shown by age in Table LXXIX (page 175). The rates for males were higher in 1954 than in 1953 in each age-group from 25-74, and for females from 15 onwards except for the group 35-44, and the Comparative Mortality Indices increased for males from 0·74 to 0·78 and for females from 0·89 to 0·95. The ratios of the 1954 rates to the average annual rates for the period 1901-10 at ages 15 and over were as follows:—

	All ages	15–	20–	25–	35–	45–	55–	65–	75 and over
Males	0·95	0·72	0·65	0·61	0·58	0·59	0·65	0·85	1·15
Females	1·65	0·35	0·51	0·93	0·95	1·24	1·55	2·25	2·65

Among males only the age-group 75 and over had higher rates in 1954 than at the beginning of the century, whereas rates were higher among women from age 45 onwards.

Domestic gas was the principal suicidal agent used by both sexes in 1954, 427 per 1,000 male suicides and 575 per 1,000 female suicides. For men, hanging (193 per 1,000) and drowning (91 per 1,000) came next in order of importance, whereas for women poisoning by analgesic and soporific drugs (167 per 1,000) and drowning (95 per 1,000) were second and third in order of preference. Table LXXX (page 175), based on the numbers of suicides in the period 1950-54, shows that the choice of coal-gas poisoning was common to each sex-age group.

Accidents in the Home and Residential Institutions

During 1954 there were 2,452 male and 4,165 female deaths certified as due to accidents in the home or residential institutions compared with 2,157 and 3,738 in 1953. Table LXXXI (page 176) shows the age-groups in which these

* Brooke, E. M. "Too Many Barbiturates?", Lancet, Vol. 1, p. 150, 1956.

deaths occurred and the causes. The proportions of these deaths in the various age-groups per cent of all ages for 1953 and 1954 were as follows :—

Age-group	1953	1954
0–4	12	10
5–14	2	2
15–44	6	5
45–64	11	10
65–74	17	17
75 and over ..	52	55

Residential institutions include:— almshouses; homes and infirmaries for the elderly; children's homes; boarding schools (including residential public schools); mental hospitals and mental deficiency institutions; prisons and borstal estsblishments.

As a cause of deaths home accidents are predominantly a feature of old age, although the number under 5 years of age is important. Table LXXXII (page 177) shows the numbers of deaths due to accidents in the home and residential institutions for each year of life from 0-4. Of a total of 414 male and 273 female deaths in this group, 302 male and 188 female were under the age of 1 year. Of these 138 male and 90 female deaths were certified as due to inhalation and ingestion of food causing obstruction or suffocation. 109 male and 67 female deaths were certified as due to accidental mechanical suffocation in bed or cradle. The latter diagnosis has been the subject of criticism for many years, and it is widely held, not only in this country but in a number of others, that many of these deaths are not due to accident, still less to careless behaviour on the part of the parents, but to obscure and rapidly fatal infections. The following table shows numbers of deaths from these two causes in children under 5 years of age, for each year 1950-1954. There has been a persistent and material male excess of deaths for which there is no obvious explanation if these deaths are accidents.

Deaths of children under 5 years of age from Inhalation and ingestion of food (E 921) and Accidental mechanical suffocation in bed or cradle (E 924)

Int. Classn. No.		1950	1951	1952	1953	1954
E.921	M	182	170	166	123	162
	F	144	119	115	116	108
E.924	M	175	163	148	116	112
	F	106	125	91	93	73

Investigations are being conducted in various centres to find the real cause of these deaths. Similarly in the case of deaths by inhalation or ingestion of food, it must be remembered that assignment to this cause involves no assumptions as to the cause of the vomiting, which is usually the immediate cause. This appears frequently to take place while the child is at rest and its attendants are asleep and its cause is rarely revealed by the enquiries made after death. It may very well be that respiratory infections, gastro-enteritis or similar infection are the underlying cause of a proportion of the cases.

Deaths of 18 children under 1 year of age were due to burns and other effects of fire and explosion of combustible material. Of these 13 resulted from a fire at a nursing home.

The figures include 29 deaths of infants certified as due to lack of care.

In the 0-4 group as a whole, 4 boys and 27 girls died as the result of ignition of clothing. This illustrates the greater risk to which their clothing exposes young girls. Scalds are also important in this group.

At ages 5-14 there were 50 male and 57 female deaths from all domiciliary accidents. 38 of the female deaths were due to burns and other effects of fire and 34 of those due to ignition of clothing. 9 boys died from burns, etc., including 6 due to ignition of clothing.

At ages 15-44 there were 195 male and 153 female deaths. The most important cause at these ages was gas poisoning which caused 47 male and 34 female deaths. 34 women died of burns, etc., including 25 due to ignition of clothing.

At ages 45-64 there were 313 male and 372 female deaths. Gas poisoning was again the chief single cause with 50 male and 82 female deaths, but falls of all kinds accounted for some 50 per cent of the male and 35 per cent of the female deaths.

At ages 65-74 there were 410 male and 712 female deaths and falls accounted for about 70 per cent of both male and female deaths. Gas poisoning resulted in 59 male and 76 female deaths. Burns from clothing caused 56 female deaths.

At ages 75 and over there were 1,070 male and 2,598 female deaths, the difference between these figures being mainly due to the fact that at these ages there are nearly twice as many women as men in the population. Falls resulted in 868 (81 per cent) male deaths and 2,171 (84 per cent) female deaths. Gas poisoning was the cause of 94 male and 174 female deaths. Burns from clothing caused 117 female deaths.

Table LXXXIII (page 183) shows separate figures for deaths among persons aged 65 and over, in the home and residential institutions. It will be seen that 18 per cent of fatal " home " accidents among men in this age-group take place in residential institutions ; the proportion for women was 15 per cent.

The proportion of accidental falls occurring in residential institutions was 21 per cent for males and 18 per cent for females.

Of the 44 persons aged 65 and over, who died of suffocation due to inhalation or ingestion of food, 23 had the accident in a residential institution.

The 1951 Census disclosed that approximatley 3 per cent of all persons aged 65 and over were living in a residential institution.

As deaths arising from accidents in the home are mainly those of old people, the increase in the numbers of these deaths can be explained largely by the increasing numbers of old persons in the population and particularly the increasing number of older women. In Table LXXXIV (page 184) numbers and rates for the main types of accident are shown for various age-groups for the years 1950-54. Numbers and rates for all causes of deaths are shown for comparison.

The rates emphasise the fact that it is the accidental falls among old people which constitute the main home accident problem so far as deaths are concerned. The increase both in the absolute numbers and proportion of unspecified falls is to some extent a reflection of the high proportion of these old people who are living alone and is more marked for women than men. A fall may be classified as " unspecified " merely because there is no information as to whether the fall was from one level to another or on the same level, e.g. there may be some doubt whether an old person died as a result of falling out of bed or of falling after getting out of bed.

One of the difficulties of interpreting the trend is that in old people the borderline between natural and violent deaths is an indeterminate one. A fall may be the result of a fainting or so called heart attack and, if the person is injured in the fall, his death will probably be reported as due to the fall. More-

over, it may often be difficult to know whether to ascribe the death to the effects of a fall or to a possibly pre-existing disease that may have been worsened as a result of a fall.

Gas poisoning deaths in old people are a special problem. It will be seen that in 1954, 58 per cent of male and 67 per cent of female deaths from this cause took place at ages 65 and over. In 1950 the relevant proportions were 46 per cent and 68 per cent. The increase in gas poisoning deaths since 1950 is almost entirely accounted for by the increase at ages 65 and over.

Change of coding procedure in 1953

During 1953 the procedure for assigning a particular class of vague statement of cause of death was reviewed. These statements consisted of certificates from coroners which were not set out in the International form and reported deaths as having been due to a natural cause "accelerated by" a violent cause. In nearly all cases the violent cause was a fall. It was decided, after a careful study of a the large number of these cases, that the normal assignment should be to the violent cause. This was adopted uniformly from 1st July, 1953.

The result of this ruling has been some increase in the numbers of deaths assigned to accidental falls. A detailed examination of all available evidence suggests that no other accidental cause of death has been significantly affected by the change.

Seasonal Variation of numbers of Home Accident Deaths

Table LXXXV (page 187) shows numbers of deaths from accidents in the home by month of occurrence. There is a marked seasonal variation in the numbers of these deaths, and for all the main types of accident there is a winter excess. This is, naturally, most pronounced for accidents caused by fire and for gas poisoning, but is also marked for falls, particularly falls on stairs. The higher numbers of deaths from falls may be due partly to lowered resistance during the winter months as well as to increased frequency of accidents. There is also a winter peak in deaths due to inhalation of food and accidental mechanical suffocation in bed or cradle, the average number of deaths in each case being twice as high in January as in July. This is probably due to the association of these causes of death with respiratory illness.

Table LXXIV.—Accidents and violence: Proportion of deaths attributed to violent causes per 100 deaths from all causes by sex and age, 1901 to 1954.

	Males					Females				
	0–	15–	35–	65 and over	All ages	0–	15–	35–	65 and over	All ages
1901–10 ..	3·22	12·88	7·22	2·31	5·05	2·85	3·06	2·18	1·54	2·31
1911–20 ..	3·74	15·69	7·16	2·29	5·69	2·95	2·97	2·26	1·63	2·31
1921–30 ..	4·43	15·49	7·06	2·37	5·48	3·06	4·02	2·74	1·79	2·49
1931–35 ..	5·60	20·29	7·37	2·55	6·05	4·11	5·54	3·31	2·25	3·04
1936–40 ..	7·30	29·58	8·67	2·89	7·30	5·73	9·52	4·82	2·83	4·10
1941–45 ..	10·34	46·29	9·46	2·85	9·13	8·25	12·26	5·58	2·74	4·56
1946	7·86	25·39	6·09	2·22	5·08	5·91	5·84	3·45	2·27	3·00
1947	7·65	24·86	6·09	2·14	4·89	5·86	5·53	3·55	2·22	2·97
1948	8·91	24·61	6·04	2·13	4·88	7·06	5·56	3·70	2·18	3·02
1949	9·47	27·04	5·87	1·96	4·62	7·02	5·80	3·34	2·01	2·72
1950	9·20	30·36	5·93	1·94	4·56	7·24	6·59	3·44	2·13	2·80
1951	10·22	34·74	5·68	1·85	4·42	7·36	8·21	3·42	2·06	2·73
1952	10·28	37·65	5·97	1·91	4·65	7·67	9·46	3·58	2·11	2·84
1953	9·63	38·86	6·18	2·13	4·75	7·43	10·10	4·01	2·35	3·09
1954	9·49	39·22	6·33	2·35	4·86	7·00	12·20	4·14	2·75	3·40

Table LXXV.—Accidents and violence; Death rates per million living by sex and age, 1901 to 1954

	All ages	0–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and over
Males												
1901–10 ..	827	1,231	329	262	447	555	677	914	1,257	1,623	1,818	2,621
1911–20 ..	857	934	395	304	596	902	828	894	1,082	1,395	1,715	2,757
1921–30 ..	709	683	375	243	449	584	536	658	917	1,259	1,616	2,842
1931–35 ..	770	697	370	228	533	739	602	640	921	1,271	1,599	3,358
1936–40 ..	968	775	420	297	651	1,121	826	825	1,046	1,475	1,835	3,887
1941–45 ..	1,167	897	612	435	935	2,192	1,263	870	1,008	1,323	1,691	3,183
1946	622	688	328	251	414	565	453	478	582	864	1,213	2,612
1947	628	664	381	228	398	528	465	465	633	850	1,210	2,786
1948	562	585	318	179	350	458	398	406	574	844	1,136	2,320
1949	569	547	299	194	386	509	387	433	583	805	1,084	2,554
1949*	567	541	298	193	386	508	387	431	579	797	1,085	2,556
1950*	562	461	252	153	376	555	423	418	579	807	1,120	2,451
1951*	591	487	259	190	362	608	474	429	591	814	1,137	2,745
1952*	568	473	217	167	415	643	445	436	546	796	1,092	2,450
1953*	582	418	215	151	373	603	446	429	583	822	1,198	2,811
1954*	593	393	168	161	369	580	426	445	583	846	1,256	3,214
Females												
1901–10 ..	329	1,059	226	81	103	111	135	198	307	423	752	2,287
1911–20 ..	300	767	234	98	117	120	127	179	272	382	728	2,364
1921–30 ..	283	487	182	71	117	127	126	168	268	397	716	2,516
1931–35 ..	346	505	201	81	142	155	161	194	297	443	878	3,044
1936–40 ..	477	570	230	137	222	233	235	281	412	595	1,116	3,707
1941–45 ..	499	687	322	206	256	274	276	307	404	552	959	3,064
1946	326	494	149	70	83	86	116	152	225	351	661	2,725
1947	334	503	162	63	82	81	109	145	237	356	703	2,707
1948	306	434	153	63	72	76	99	137	231	347	614	2,341
1949	306	387	128	63	81	92	85	128	212	336	617	2,513
1949*	302	378	128	63	79	92	81	126	212	330	612	2,492
1950*	308	338	127	47	80	81	79	125	223	323	606	2,698
1951*	321	350	96	45	88	87	85	126	228	327	648	2,803
1952*	298	330	100	50	77	86	85	120	213	322	604	2,406
1953*	329	319	94	62	73	86	88	139	232	349	670	2,727
1954*	358	264	86	48	81	90	107	138	239	357	783	3,066

* According to the 6th Revision of the International Classification. Other years according to the classification in use at the time.

Table LXXVI.—Motor vehicle accidents; Death rates per million living by sex and age, and Comparative Mortality Indices by sex, 1931 to 1954

	All ages	0–	10–	15–	20–	25–	35–	45–	55–	65–	75 and over	C.M.I.† (1938 = 1·00)
Males												
1931–35 ..	208	184	93	204	368	210	133	153	206	363	678	**1·12**
1936–40 ..	216	159	86	176	363	209	152	171	257	411	749	**1·01**
1941–45 ..	199	198	113	152	227	193	149	160	228	353	556	**0·92**
1946	153	144	109	161	205	139	109	102	160	241	498	**0·73**
1947	146	134	75	127	209	139	106	111	147	246	460	**0·70**
1948	126	135	63	122	173	112	79	97	142	194	400	**0·60**
1949	140	123	80	147	226	117	103	101	137	229	451	**0·67**
1949* ..	142	126	83	150	232	118	105	101	138	232	454	**0·68**
1950* ..	151	104	60	177	279	164	106	102	153	242	439	**0·72**
1951* ..	161	112	88	178	308	174	112	117	160	231	505	**0·77**
1952* ..	149	105	73	165	301	150	123	105	144	219	403	**0·71**
1953* ..	158	98	61	170	307	164	110	126	160	245	518	**0·75**
1954* ..	161	77	57	194	323	165	116	127	170	259	564	**0·76**
Females												
1931–35 ..	68	106	34	49	50	31	29	49	95	181	267	**1·17**
1936–40 ..	64	84	30	49	48	29	27	45	85	173	279	**1·02**
1941–45 ..	56	106	42	42	40	29	26	37	61	107	172	**0·86**
1946	47	72	30	36	27	21	20	27	56	100	185	**0·70**
1947	47	71	26	37	23	17	22	33	54	100	177	**0·69**
1948	43	79	31	25	16	14	19	21	49	101	157	**0·64**
1949	41	65	32	32	30	10	16	22	44	95	151	**0·60**
1949* ..	41	66	32	32	30	10	16	22	44	95	151	**0·61**
1950* ..	46	64	25	40	30	17	19	35	48	84	200	**0·67**
1951* ..	49	58	22	47	37	19	23	35	54	101	198	**0·71**
1952* ..	42	52	21	34	31	19	18	28	43	94	168	**0·62**
1953* ..	45	56	25	36	37	16	18	33	49	87	181	**0·65**
1954* ..	51	45	15	36	37	23	23	32	63	120	218	**0·72**

* According to the 6th Revision of the International Classification (Nos. E810-E835). Other years according to the classification in use at the time.

† C.M.I's. are based on civilian deaths and civilian populations for the years 1940-1949 inclusive.

Table LXXVII.—Motor vehicle accidents (E810-E835): Death rates per million living by sex and age in standard regions and aggregates summary (by type of area), 1954

(*based on deaths according to area of normal residence*)

	Males					Females				
	0–	15–	45–	65 and over	All ages	0–	15–	45–	65 and over	All ages
ENGLAND AND WALES	**71**	**177**	**145**	**357**	**161**	**36**	**27**	**46**	**155**	**51**
Conurbations (excluding Greater London)	75	145	144	390	148	40	25	59	192	57
Greater London	49	131	107	375	128	*22*	22	50	174	49
Areas outside conurbations	76	200	157	343	174	39	30	41	139	49
Urban areas with populations of 100,000 and over	74	137	123	379	140	37	29	40	170	51
Urban areas with populations of 50,000 and under 100,000	93	159	115	354	152	*27*	*26*	*40*	167	50
Urban areas with populations under 50,000 ..	64	171	146	300	152	43	27	37	117	46
Rural districts	86	282	209	364	228	40	35	46	131	52
Regions:										
Northern	117	135	139	355	152	*41*	*26*	*41*	162	49
East and West Ridings ..	65	181	157	301	158	*24*	*16*	58	180	49
North Western	65	167	132	401	155	46	30	47	174	57
North Midland	95	232	162	294	188	*28*	*23*	*39*	115	39
Midland	75	171	138	448	162	57	35	62	160	61
Eastern	84	219	164	412	194	*50*	38	*43*	169	61
Remainder of South Eastern	*50*	159	172	320	155	*32*	*27*	*32*	148	50
Southern	72	220	167	346	186	*23*	44	*37*	155	54
South Western	78	224	157	244	176	*33*	*23*	*44*	116	45
Wales (including Monmouthshire)	*62*	180	190	359	172	*41*	*23*	*29*	*79*	35

Table LXXVIII.—Deaths of pedestrians, pedal cyclists, motor cyclists, motor vehicle occupants and others in motor vehicle traffic accidents, motor vehicle non-traffic accidents and other road vehicle accidents, by sex, 1936-40, 1941-45, 1946-49 and 1949 to 1954

	1936–40 (Annual average)		1941–45 (Annual average)		1946–49 (Annual average)		1949		1950		1951		1952		1953		1954	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Pedestrians:																		
Motor vehicle traffic accidents	2,148	1,010	2,073	898	1,295	706	1,214	674	1,140	726	1,302	725	1,099	663	1,182	674	1,201	807
Motor vehicle non-traffic accidents							13	2	32	6	43	10	54	8	32	10	55	8
Other road vehicle accidents	194	79	166	70	79	47	67	51	76	51	59	43	73	31	48	26	57	27
Pedal cyclists:																		
Motor vehicle traffic accidents	777	131	557	140	464	86	496	78	475	80	473	80	443	74	461	73	457	79
Motor vehicle non-traffic accidents							—	—	1	—	—	—	—	—	—	—	—	—
Other road vehicle accidents	249	44	230	51	159	29	157	30	168	31	160	18	125	31	113	30	126	23
Motor Cyclists:																		
Motor vehicle traffic accidents	1,018	77	651	27	659	48	733	56	979	79	1,019	94	1,002	78	1,040	95	1,049	70
Motor vehicle non-traffic accidents							6	—	7	—	3	—	10	1	10	1	8	—
Motor vehicle occupants and others:																		
Motor vehicle traffic accidents	631	191	762	167	549	155	498	118	505	150	499	200	469	143	542	179	582	202
Motor vehicle non-traffic accidents							50	1	48	2	57	5	70	3	75	1	71	—
Other road vehicle accidents	36	3	47	11	26	6	32	7	50	13	19	7	31	14	20	10	15	10

Table LXXIX.—Suicide: Death rates per million living by sex and age, and Comparative Mortality Indices by sex, 1901 to 1954

	All ages	0–	10–	15–	20–	25–	35–	45–	55–	65–	75 and over	C.M.I.† (1938 = 1·00)
Males												
1901–10	157	*1*	*4*	36	91	152	252	397	523	508	382	**1·17**
1911–20	130	—	*3*	32	69	122	196	278	389	405	350	**0·90**
1921–30	166	—	*2*	31	78	111	211	346	487	513	438	**1·04**
1931–35	196	*0*	*2*	40	96	140	210	379	542	533	483	**1·14**
1936–40	172	—	*2*	32	89	118	177	284	462	477	466	**0·95**
1941–45	126	—	*3*	43	72	100	128	185	271	347	382	**0·66**
1946	138	—	*5*	31	49	94	154	200	300	391	465	**0·72**
1947	136	—	*3*	35	59	94	123	209	314	382	480	**0·71**
1948	144	—	*2*	29	73	86	134	219	338	469	388	**0·76**
1949	144	—	*1*	32	60	80	134	236	334	422	490	**0·76**
1950	136	—	*1*	30	60	70	122	222	323	416	421	**0·71**
1951	135	—	*6*	24	53	78	120	213	303	410	477	**0·70**
1952	132	—	*1*	34	55	78	120	198	320	389	413	**0·69**
1953	142	—	*1*	28	67	89	126	222	325	411	480	**0·74**
1954	149	—	*3*	26	59	93	145	235	340	430	439	**0·78**
Females												
1901–10	49	—	*3*	34	45	56	81	109	108	88	49	**0·75**
1911–20	47	—	*2*	30	41	50	74	100	102	81	52	**0·69**
1921–30	63	—	*1*	25	43	57	87	135	143	108	63	**0·84**
1931–35	80	—	*0*	23	49	77	108	154	166	134	84	**1·01**
1936–40	79	—	*1*	14	38	65	99	155	169	142	89	**0·98**
1941–45	62	—	*1*	*9*	22	52	77	108	128	117	73	**0·74**
1946	74	—	*1*	15	26	53	87	135	157	146	92	**0·89**
1947	76	—	—	*10*	28	51	80	134	160	166	114	**0·90**
1948	78	—	—	*11*	20	50	80	141	183	173	98	**0·93**
1949	75	—	*1*	15	26	45	77	127	165	165	138	**0·89**
1950	70	—	*1*	*10*	23	34	75	124	157	153	115	**0·82**
1951	72	—	—	*9*	20	38	66	135	160	167	105	**0·84**
1952	68	—	*1*	*11*	*12*	35	66	118	154	164	97	**0·79**
1953	76	—	*3*	*10*	22	39	79	127	167	171	127	**0·89**
1954	81	—	—	*12*	23	52	77	135	167	198	130	**0·95**

† C.M.I's. are based on civilian deaths and civilian populations for the years 1940-1949 inclusive.

Table LXXX.—Suicide: Proportions per 1,000 deaths according to external agent, by sex and age in the period 1950-54

Agent	Males					Females				
	15–	35–	55–	75 and over	All ages	15–	35–	55–	75 and over	All ages
Coal gas poisoning	375	413	384	415	398	501	530	532	550	529
Other poisoning	137	136	99	58	113	226	216	189	170	202
Hanging or strangulation	206	175	198	180	189	65	77	78	68	76
Drowning	45	82	125	139	100	79	111	140	134	122
Firearms or explosives	95	71	55	50	65	18	7	1	—	5
Cutting and piercing instruments ..	28	44	75	93	59	15	14	19	27	17
Jumping from high place	28	23	24	38	26	36	25	25	41	27
Other agents	86	56	40	27	50	60	20	16	10	22
Total	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

Table LXXXI.—Deaths from accidents in the home and residential institutions by sex and age. England and Wales, 1954

Int. List No. (6th revision) Fourth digit Codes 0+7	Cause of death		All ages	0–4	5–14	15–44	45–64	65–74	75 and over
E870–E888	Poisoning	M.	78	15	2	15	30	11	5
		F.	102	5	1	22	46	17	11
E871	Accidental poisoning by barbituric acid and derivatives	M.	33	—	—	6	19	7	1
		F.	72	—	1	12	43	9	7
E872	Accidental poisoning by aspirin and salicylates	M.	3	1	—	—	—	1	1
		F.	4	—	—	1	1	2	—
E890–E895	Gas poisoning	M.	264	9	5	47	50	59	94
		F.	374	2	6	34	82	76	174
E900	Fall on stairs	M.	343	6	—	16	63	67	191
		F.	518	2	—	8	45	114	349
E901	Fall from ladder	M.	41	—	—	10	10	13	8
		F.	6	—	—	—	—	3	3
E902	Other falls from one level to another	M.	181	13	5	16	31	38	78
		F.	223	5	3	4	20	48	143
E903	Fall on same level	M.	344	—	—	3	23	60	258
		F.	826	1	1	3	30	121	670
E904	Unspecified falls	M.	462	1	—	5	25	98	333
		F.	1,244	—	—	3	35	200	1,006
E916	Accidents caused by fire and explosion of combustible material	M.	170	21	9	5	30	38	67
		F.	427	47	38	34	49	85	174
	Burns by clothing	M.	51	4	6	—	8	12	21
		F.	290	27	34	25	31	56	117
	from domestic fire (open)	M.	19	2	4	—	2	3	8
		F.	96	12	19	9	9	21	26
	gas fire, stove, &c.	M.	8	1	1	—	—	2	4
		F.	39	2	4	8	6	5	14
	electric fire	M.	4	—	—	—	1	2	1
		F.	73	4	3	2	8	12	44
	other specified	M.	16	—	—	—	3	5	8
		F.	40	5	2	5	7	6	15
	not specified	M.	4	1	1	—	2	—	—
		F.	42	4	6	1	1	12	18
	Burns by falling into fire	M.	39	—	—	1	5	14	19
		F.	54	—	—	2	8	13	31
	Burns by conflagration	M.	42	13	3	2	8	7	9
		F.	46	16	3	4	6	6	11
	Burns by other specified means	M.	37	4	—	2	9	4	18
		F.	36	4	1	3	4	10	14
	Burns by means not specified	M.	1	—	—	—	—	1	—
		F.	1	—	—	—	—	—	1
E917	Accidents caused by hot substance, &c.	M.	35	21	3	—	1	2	8
		F.	66	15	—	3	8	11	29
E914	Accidents caused by electric current	M.	27	5	3	14	4	1	—
		F.	18	1	—	5	9	2	1
E921	Inhalation and ingestion of food	M.	212	152	5	18	18	10	9
		F.	155	98	3	9	20	13	12
E924	Accidental mechanical suffocation in bed or cradle	M.	130	110	5	11	3	1	—
		F.	89	72	1	12	3	—	1
E929	Drowning	M.	34	16	1	5	4	4	4
		F.	38	3	—	5	13	11	6
Remainder of E870–E936	Other accidents	M.	131	45	12	30	21	8	15
		F.	79	22	4	11	12	11	19
E870–E936	**All accidents in home or residential institutions**	**M.**	**2,452**	**414**	**50**	**195**	**313**	**410**	**1,070**
		F.	**4,165**	**273**	**57**	**153**	**372**	**712**	**2,598**

Table LXXXII.—Death from accidents in the home and residential institutions at ages under 5 years. England and Wales, 1954

Int. Classn. No.	Cause of death		Accidents in the Home						Accidents in Residential Institutions					
			under 1 Year	1 Year	2 Years	3 Years	4 Years	Total 0–4 Years	under 1 Year	1 Year	2 Years	3 Years	4 Years	Total 0–4 Years
E870	Poisoning by morphine and other opium derivatives	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E871	Poisoning by barbituric acid and derivatives	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E872	Poisoning by aspirin and salicylates	M.	1	—	—	—	—	1	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E873	Poisoning by bromides	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E874	Poisoning by other analgesic and soporific drugs	M.	—	—	—	—	—	—	—	—	—	1	—	1
		F.	—	—	—	1	—	1	—	—	—	—	—	—
E875	Poisoning by sulphonamides	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E876	Poisoning by strychnine	M.	1	—	—	—	—	1	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E877	Poisoning by belladonna, hyoscine and atropine	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E878	Poisoning by other and unspecified drugs	M.	—	5	1	—	—	6	—	—	—	—	—	—
		F.	—	1	—	—	—	1	1	—	—	—	—	1
E879	Poisoning by noxious foodstuffs	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—

Table LXXXII.—*continued.*

Int. Classn. No.	Cause of death		Accidents in the Home						Accidents in Residential Institutions					
			under 1 Year	1 Year	2 Years	3 Years	4 Years	Total 0–4 Years	under 1 Year	1 Year	2 Years	3 Years	4 Years	Total 0–4 Years
E880	Poisoning by alcohol	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E881	Poisoning by petroleum products	M.	—	—	—	1	—	1	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E882	Poisoning by industrial solvents	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E883	Poisoning by corrossive aromatics, acids and caustic alkalis	M.	1	—	—	—	—	1	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E884	Poisoning by mercury and its compounds	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E885	Poisoning by lead and its compounds	M.	—	—	1	—	1	2	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E886	Poisoning by arsenic and antimony and their compounds	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E887	Poisoning by fluorides	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E888	Poisoning by other and unspecified solid and liquid substances	M.	—	2	—	—	—	2	—	—	—	—	—	—
		F.	—	—	2	—	—	2	—	—	—	—	—	—
E890	Poisoning by utility (illuminating) gas	M.	2	5	2	—	—	9	—	—	—	—	—	—
		F.	—	1	—	—	1	2	—	—	—	—	—	—

Table LXXXII.—*continued.*

Int. Classn. No.	Cause of death		Accidents in the Home						Accidents in Residential Institutions					
			under 1 Year	1 Year	2 Years	3 Years	4 Years	Total 0–4 Years	under 1 Year	1 Year	2 Years	3 Years	4 Years	Total 0–4 Years
E891	Poisoning by motor vehicle exhaust gas	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E892	Poisoning by other carbon monoxide gas	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E893	Poisoning by cyanide gas	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E894	Poisoning by other specified gases and vapours ..	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E895	Poisoning by unspecified gases and vapours ..	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E900	Fall on stairs	M.	—	1	3	1	1	6	—	—	—	—	—	—
		F.	1	—	—	1	—	2	—	—	—	—	—	—
E901	Fall from ladders	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E902	Other falls from one level to another ..	M.	4	5	3	—	1	13	—	—	—	—	—	—
		F.	1	1	3	—	—	5	—	—	—	—	—	—
E903	Fall on same level	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	1	—	—	—	1	—	—	—	—	—	—
E904	Unspecified falls	M.	—	—	—	1	—	1	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—

Table LXXXII.—*continued.*

Int. Classn. No.	Cause of death		Accidents in the Home						Accidents in Residential Institutions					
			under 1 Year	1 Year	2 Years	3 Years	4 Years	Total 0–4 Years	under 1 Year	1 Year	2 Years	3 Years	4 Years	Total 0–4 Years
E910	Blow from falling object	M.	—	—	2	2	—	4	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E911	Accident caused by vehicle	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E912	Accident caused by machinery	M.	—	—	—	—	—	—	1	—	—	—	—	1
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E913	Accident caused by cutting and piercing instruments	M.	—	1	—	—	—	1	—	—	—	—	—	—
		F.	—	—	—	—	1	1	—	—	—	—	—	—
E914	Accident caused by electric current	M.	—	3	1	1	—	5	—	—	—	—	—	—
		F.	—	—	1	—	—	1	—	—	—	—	—	—
E915	Accident caused by explosion of pressure vessel	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E916	Accident caused by fire and explosion of combustible material	M.	3	3	1	3	4	14	7	—	—	—	—	7
		F.	2	9	11	12	7	41	6	—	—	—	—	6
E917	Accident caused by hot substance, corrosive liquid and steam	M.	2	11	4	—	1	18	3	—	—	—	—	3
		F.	—	7	5	1	2	15	—	—	—	—	—	—
E918	Accident caused by radiation	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E919	Accident caused by firearm	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—

Table LXXXII.—*continued.*

Int. Classn. No.	Cause of death		Accidents in the Home						Accidents in Residential Institutions					
			under 1 Year	1 Year	2 Years	3 Years	4 Years	Total 0–4 Years	under 1 Year	1 Year	2 Years	3 Years	4 Years	Total 0–4 Years
E920	Foreign body entering eye and adnexa	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E921	Inhalation and ingestion of food causing obstruction or suffocation	M.	124	9	3	1	—	137	14	1	—	—	—	15
		F.	84	5	3	—	—	92	6	—	—	—	—	6
E922	Inhalation and ingestion of other object causing obstruction or suffocation	M.	5	—	2	—	—	7	—	—	—	—	—	—
		F.	1	—	1	—	—	2	—	—	—	—	—	—
E923	Foreign body entering other orifice	M.	—	—	2	—	—	2	—	—	—	—	—	—
		F.	2	—	—	—	—	2	1	—	—	—	—	1
E924	Accidental mechanical suffocation in bed and cradle	M.	109	—	—	—	—	109	—	1	—	—	—	1
		F.	64	4	—	—	—	68	3	1	—	—	—	4
E925	Accidental mechanical suffocation in other and unspecified circumstances	M.	2	2	—	—	—	4	—	—	—	—	—	—
		F.	2	—	—	—	—	2	—	—	—	—	—	—
E926	Lack of care of infants under 1 year of age	M.	18	—	—	—	—	18	—	—	—	—	—	—
		F.	11	—	—	—	—	11	—	—	—	—	—	—
E927	Accidents caused by bites and stings of venomous animals and insects	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E928	Other accidents caused by animals	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E929	Accidental drowning and submersion	M.	1	6	6	1	2	16	—	—	—	—	—	—
		F.	—	3	—	—	—	3	—	—	—	—	—	—

Table LXXXII.—*continued.*

Int. Classn. No.	Cause of death		Accidents in the Home						Accidents in Residential Institutions					
			under 1 Year	1 Year	2 Years	3 Years	4 Years	Total 0–4 Years	under 1 Year	1 Year	2 Years	3 Years	4 Years	Total 0–4 Years
E930	High and low air pressure	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E931	Excessive heat and insolation	M.	1	—	—	—	—	1	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E932	Excessive cold	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E933	Hunger, thirst and exposure	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E934	Cataclysm	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E935	Lightning	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
E936	Other and unspecified accidents	M.	3	4	—	—	—	7	—	—	—	—	—	—
		F.	2	—	—	—	—	2	1	—	—	—	—	1
E870–E936	**All accidental deaths**	**M.**	**277**	**57**	**31**	**11**	**10**	**386**	**25**	**2**	—	**1**	—	**28**
		F.	**170**	**32**	**26**	**15**	**11**	**254**	**18**	**1**	—	—	—	**19**

Table LXXXIII.—Accidental deaths by cause and sex at ages 65 and over at home and in residential institutions, 1954, England and Wales

International Classification No.	Cause of death	Home			Residential Institution		
		Males	Females	Persons	Males	Females	Persons
E870–E888	**Accidental poisoning by solid and liquid substances**	**15**	**26**	**41**	**1**	**2**	**3**
E871	Accidental poisoning by barbituric acid and derivatives	8	15	23	—	1	1
E883	Accidental poisoning by corrosive aromatics, acids and caustic alkalis	1	2	3	1	1	2
Remainder E870–E888	Accidental poisoning by other solid and liquid substances	6	9	15	—	—	—
E890–E895	**Accidental poisoning by gases and vapours**	**153**	**249**	**402**	—	**1**	**1**
E890	Accidental poisoning by utility (illuminating) gas	151	243	394	—	1	1
Remainder E890–E895	Accidental poisoning by other gases and vapours	2	6	8	—	—	—
E900–E904	**Accidental falls**	**901**	**2,174**	**3.075**	**243**	**483**	**726**
E900	Fall on stairs	249	447	696	9	16	25
E901	Fall from ladders	21	6	27	—	—	—
E902	Other falls from one level to another	70	123	193	46	68	114
E903	Fall on same level	215	562	777	103	229	332
E904	Unspecified falls	346	1,036	1,382	85	170	255
E910–E936	**Other accidents**	**143**	**348**	**491**	**24**	**27**	**51**
E916	Accident caused by fire and explosion of combustible material	96	257	353	9	2	11
F917	Accident caused by hot substance, corrosive liquid and steam	7	33	40	3	7	10
E921	Inhalation and ingestion of food causing obstruction or suffocation	11	10	21	8	15	23
E929	Accidental drowning and submersion	7	17	24	1	—	1
Remainder E910–E936	Remainder of other accidents	22	31	53	3	3	6

Table LXXXIV.—Accidents in the home and residential institution, 1950 to 1954, by sex at certain ages, in England and Wales

Year	Age	All causes		Gas poisoning (E890)		Burns and scalds (E916-E918)		Falls on stairs from ladder and from one level to another (E900–E902)		Fall on same level (E903)		Unspecified falls (E904)		Other Accidents (Rem. of E870-E936)	
		Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
								Numbers of Deaths							
1950	All Ages	261,152	249,149	147	242	186	413	428	779	280	947	124	393	660	487
1951		281,724	267,656	178	281	211	483	508	855	302	944	162	411	641	507
1952		257,760	239,724	177	284	191	492	485	710	287	854	182	495	633	436
1953		259,490	244,039	252	302	200	398	487	655	371	1,003	224	785	623	595
1954		259,797	242,099	250	364	205	493	565	747	344	826	462	1,244	626	491
1950	0–4	14,265	10,639	3	—	59	78	21	17	1	—	—	1	450	305
1951		14,030	10,326	8	5	66	82	18	10	4	4	1	3	438	314
1952		12,593	9,318	6	4	51	88	22	20	4	1	2	1	383	267
1953		12,244	9,284	11	2	53	51	21	16	2	—	1	1	312	261
1954		11,391	8,270	9	2	42	62	19	7	—	1	1	—	343	201
1950	5–14	1,979	1,362	2	2	10	31	8	4	2	—	—	—	21	6
1951		1,884	1,215	4	4	20	39	8	2	2	1	1	—	26	9
1952		1,734	1,177	2	4	12	53	4	1	1	—	—	1	23	4
1953		1,708	1,216	5	2	12	32	10	—	—	1	—	—	34	11
1954		1,549	1,060	5	5	12	38	5	3	—	1	—	—	28	10
1950	15–44	18,685	15,361	31	29	10	26	36	19	6	5	3	1	79	38
1951		17,883	14,248	20	26	11	25	39	9	2	4	6	3	69	55
1952		16,454	12,316	32	33	4	34	41	12	3	3	1	4	97	37
1953		15,297	11,896	43	29	11	25	49	15	5	3	1	2	95	68
1954		14,907	11,409	38	33	5	37	42	12	3	3	5	3	102	65

Table LXXXIV.—*continued.*

Year	Age	All causes		Gas poisoning (E890)		Burns and scalds (E916-E918)		Falls on stairs from ladder and from one level to another (E900-E902)		Fall on same level (E903)		Unspecified falls (E904)		Other Accidents (Rem. of E870-E936)	
		Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1950	45–64	69,209	48,048	42	43	14	43	68	79	12	27	4	17	64	69
1951		74,166	49,925	57	47	12	48	83	71	17	33	13	16	63	68
1952		68,914	46,135	36	58	16	69	70	65	13	38	13	16	77	72
1953		69,529	45,605	55	69	27	56	96	66	17	34	13	27	93	97
1954		69,668	45,273	47	80	31	57	104	65	23	30	25	35	83	105
1950	65–74	73,592	63,878	*	*	*	*	*	*	*	*	*	*	*	*
1951		80,670	69,671	29	60	26	84	118	189	58	127	35	57	25	29
1952		73,060	61,712	49	63	28	80	111	144	58	132	43	80	28	23
1953		73,936	61,949	49	65	26	79	107	126	76	148	49	121	53	88
1954		73,606	61,625	57	72	40	96	118	165	60	121	98	200	37	58
1950	75 and over	83,422	109,861	*	*	*	*	*	*	*	*	*	*	*	*
1951		93,091	122,271	60	139	76	205	242	574	219	775	106	332	20	32
1952		85,005	109,066	52	122	80	168	237	468	208	680	123	393	25	33
1953		86,776	114,089	89	135	71	155	204	432	271	817	160	634	36	70
1954		88,676	114,462	94	172	75	203	277	495	258	670	333	1,006	33	52
1950*	65 and over	157,014	173,739	69	168	93	235	295	660	259	915	117	374	46	69
		Rates per million population													
1950	All Ages	12,337	10,995	6·9	11	8·8	18	20	34	13	42	5·9	17	31	21
1951		13,387	11,754	8·5	12	10	21	24	38	14	41	7·7	18	30	22
1952		12,210	10,493	8·4	12	9·0	22	23	31	14	37	8·6	22	30	19
1953		12,237	10,655	12	13	9·4	17	23	29	17	44	11	34	29	26
1954		12,204	10,532	12	16	9·6	21	27	32	16	36	22	54	29	21
1950	0–4	7,480	5,852	*1·6*	—	31	43	11	*9·4*	*0·5*	—	—	*0·6*	236	168
1951		7,346	5,677	*4·2*	*2·7*	35	45	*9·4*	*5·5*	*2·1*	*2·2*	*0·5*	*1·6*	229	173
1952		7,020	5,446	*6·3*	*2·3*	28	51	12	12	*2·2*	*0·6*	*0·1*	*0·6*	213	156
1953		7,061	5,623	*3·3*	*1·2*	31	31	12	*9·7*	*1·2*	—	*0·6*	*0·6*	180	158
1954		6,689	5,096	*5·3*	*1·2*	25	38	*11*	*4·3*	—	*0·6*	*0·6*	—	201	124

Table LXXXIV.—*continued.*

Year	Age	All causes		Gas poisoning (E890)		Burns and scalds (E916-E918)		Falls on stairs from ladder and from one level to another (E900-E902)		Fall on same level (E903)		Unspecified falls (E904)		Other Accidents (Rem. of E870-E936)	
		Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1950	5–14	657	471	*0·7*	*0·7*	*3·3*	11	*2·7*	*1·4*	*0·7*	—	—	—	7·0	*2·1*
1951		615	413	*1·3*	*1·4*	6·5	13	*2·6*	*0·7*	*0·7*	*0·3*	*0·3*	—	8·5	*3·1*
1952		539	382	*0·6*	*1·3*	*3·7*	17	*1·2*	*0·3*	*0·3*	—	—	*0·3*	7·2	*1·3*
1953		515	383	*1·5*	*0·6*	*3·6*	10	*3·0*	—	—	*0·3*	—	—	10	*3·5*
1954		457	327	*1·5*	*1·5*	*3·5*	12	*1·5*	*0·9*	—	*0·3*	—	—	8·3	*3·1*
1950	15–44	1,988	1,608	3·3	3·0	*1·1*	2·7	3·8	*2·0*	*0·6*	*0·5*	*0·3*	*0·1*	8·4	4·0
1951		1,947	1,506	2·2	2·7	*1·2*	2·6	4·2	*1·0*	*0·2*	*0·4*	*0·7*	*0·3*	7·5	5·8
1952		1,807	1,312	3·5	3·5	*0·4*	3·6	4·5	*1·3*	*0·3*	*0·3*	*0·1*	*0·4*	11	3·9
1953		1,687	1,278	4·7	3·1	*1·2*	2·7	5·4	*1·6*	*0·6*	*0·3*	*0·1*	*0·2*	10	7·3
1954		1,656	1,235	4·2	3·6	*0·6*	4·0	4·7	*1·3*	*0·3*	*0·3*	*0·6*	*0·3*	11	7·0
1950	45–64	14,241	8,578	8·6	7·7	*2·9*	7·7	14	14	*2·5*	4·8	*0·8*	*3·0*	13	12
1951		15,102	8,787	12	8·3	*2·4*	8·4	17	12	*3·5*	5·8	*2·6*	*2·8*	13	12
1952		13,788	8,042	7·2	10	*3·2*	12	14	11	*2·6*	6·6	*2·6*	*2·8*	15	13
1953		13,679	7,867	11	12	5·3	9·7	19	11	*3·3*	5·9	*2·6*	4·7	18	17
1954		13,478	7,732	9·1	14	6·0	9·7	20	11	4·4	5·1	4·8	6·0	16	18
1950	65–74	53,328	34,697	*	*	*	*	*	*	*	*	*	*	*	*
1951		58,797	36,922	21	32	19	45	86	100	42	67	26	30	18	15
1952		53,057	32,310	36	33	20	42	81	75	42	69	31	42	20	12
1953		53,733	32,148	36	34	19	41	78	65	55	77	36	63	39	46
1954		53,338	31,635	41	37	29	49	86	85	43	62	71	103	27	30
1950	75 and over	136,757	114,797	*	*	*	*	*	*	*	*	*	*	*	*
1951		154,124	125,149	99	142	126	210	401	588	363	793	175	340	33	33
1952		137,105	107,454	84	120	129	166	382	461	335	670	198	387	40	33
1953		137,959	109,385	141	129	113	149	324	414	431	783	254	608	57	67
1954		137,482	105,592	146	159	116	187	429	457	400	618	516	928	51	48
1950*	65 and over	78,902	62,094	35	60	47	84	148	236	130	327	59	134	23	25

* No further breakdown available for ages 65 and over for causes E870-E936 in 1950

Table LXXXV.—Deaths from accidents in the home and residential institutions by Month of Occurrence. Combined years 1950-1952, 1953 and 1954

International Statistical Classn. No.	Cause of death		Persons											
			Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
E870–E888	Poisoning	1950–2	41	42	43	47	34	28	41	32	31	53	29	41
		1953	14	19	15	11	12	12	16	18	20	18	10	19
		1954	13	16	14	11	20	14	14	14	13	16	13	16
E890–E895	Gas poisoning	1950–2	203	166	141	103	62	46	56	40	87	103	141	214
		1953	80	76	54	43	29	33	25	29	33	57	55	61
		1954	77	109	61	52	44	32	26	33	25	40	66	73
E900	Fall on stairs	1950–2	250	198	176	155	133	139	139	149	155	171	204	252
		1953	85	71	56	59	55	34	43	59	49	67	67	103
		1954	80	92	79	62	62	50	57	66	60	78	66	107
E901	Fall from ladder	1950–2	12	3	7	7	9	8	8	12	19	22	9	6
		1953	1	1	7	3	6	4	7	1	5	4	3	2
		1954	3	3	4	6	5	5	4	3	1	6	4	3
E902	Other falls from one level to another	1950–2	161	151	144	114	135	115	112	134	109	128	94	116
		1953	37	31	24	28	31	27	32	31	35	38	24	28
		1954	38	25	38	30	28	36	34	32	39	32	33	34
E903	Fall on same level	1950–2	373	386	369	315	258	292	258	234	237	284	267	356
		1953	142	137	134	90	89	110	104	97	109	126	96	123
		1954	124	151	118	99	101	81	81	77	78	78	81	111
E904	Unspecified falls	1950–2	189	157	154	130	105	108	91	117	128	173	188	234
		1953	88	76	79	78	56	58	89	66	103	93	107	125
		1954	153	173	187	145	138	105	131	114	122	139	137	168
E916	Accidents caused by fire and explosion of combustible material	1950–2	252	218	176	163	97	54	65	61	65	104	122	277
		1953	68	89	48	44	31	21	28	18	21	37	39	50
		1954	89	113	60	57	27	38	33	28	20	24	44	68

Table LXXXV.—*continued.*

International Statistical Classn. No.	Cause of death		Persons										
			Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
E917	Accidents caused by hot substance, &c.	1950–2	33	37	36	29	25	35	17	24	25	15	22	28
		1953	5	8	13	8	5	10	6	4	6	8	18	11
		1954	14	13	7	15	7	4	8	8	1	7	10	7
E914	Accidents caused by electric current ..	1950–2	10	13	10	8	9	11	8	9	14	5	11	9
		1953	3	4	—	3	4	2	4	5	3	2	4	2
		1954	3	1	4	3	3	1	4	7	6	5	5	3
E921	Inhalation and ingestion of food ..	1950–2	131	105	130	100	74	45	43	60	74	72	99	120
		1953	36	38	33	31	28	21	19	12	16	22	25	26
		1954	36	33	36	39	35	23	19	10	27	37	33	36
E924	Accidental mechanical suffocation in bed or cradle	1950–2	101	88	81	79	50	50	57	51	46	58	55	110
		1953	32	13	20	23	25	21	16	14	6	17	11	19
		1954	20	22	23	13	23	17	11	17	17	14	14	22
E929	Drowning	1950–2	8	9	15	17	12	17	16	18	5	10	17	10
		1953	3	3	4	3	2	7	3	6	5	7	6	4
		1954	4	4	4	11	8	8	4	3	12	6	4	4
Remainder of E870–E936	All other accidents	1950–2	73	61	69	70	57	58	52	49	46	43	55	74
		1953	69	161	30	25	16	17	12	17	13	12	9	13
		1954	23	21	19	21	25	12	22	17	13	20	14	9
E870–E936	All accidents in home and residential institutions	1950–2	1,837	1,634	1,551	1,337	1,060	1,006	963	990	1,041	1,241	1,313	1,847
		1953	663	727	517	449	389	377	404	377	424	508	474	586
		1954	677	776	654	564	526	426	448	429	434	502	524	661

MISCELLANEOUS

Infectious Diseases—deaths occurring a long period after onset

The rules for classification, embodied in the International Statistical Classification of Diseases, Injuries and Causes of Death, 1948, state that "when an acute infective disease classified to categories 040-043, 050, 055, 056, 058, 084-087, 100-108 is certified as the underlying cause of some other condition and the interval between its onset and death is stated to be one year or more, it is recommended that such deaths should be appropriately identified in tabulation." This practice has been followed in England and Wales and the deaths in question in 1954 are separately tabulated below. Seven infectious diseases were involved, Typhoid (1 death) Paratyphoid (1 death) Scarlet fever (23 deaths) Diphtheria (1 death) Whooping cough (1 death) Measles (5 deaths) and Rubella (German measles) (1 death).

Age at death	Interval between onset of infectious disease and death (years)					
	1–4	5–9	10–19	20–29	30–39	40 and over
			Typhoid fever (040)			
65 and over	—	—	—	—	—	1
			Paratyphoid fever (041)			
15–44	—	—	1	—	—	—
			Scarlet fever (050)			
5–14	2	—	—	—	—	—
15–44	1	—	1	3	2	—
45–64	—	—	1	—	—	7
65 and over	—	1	1	—	—	4
			Diphtheria (055)			
45–64	—	—	—	—	—	1
			Whooping cough (056)			
5–14	—	1	—	—	—	—
			Measles (085)			
5–14	2	1	—	—	—	—
15–44	—	—	—	2	—	—
			Rubella (German measles) (086)			
5–14	1	—	—	—	—	—

Details of age, sex, other conditions on death certificate, and interval (in years) since onset of the infectious disease are:—

Age	Sex	Other conditions on death certificate	Interval since onset of infectious disease (years)
		Typhoid fever	
69	M.	Chronic myocardial degeneration	46
		Paratyphoid fever	
17	F.	Chronic ulcerative colitis: Nephritis	10

Age	Sex	Other conditions on death certificate	Interval since onset of infectious disease (years)
		Scarlet fever	
13	F.	Acute chronic nephritis	4
14	M.	Chronic nephritis	15 months
26	M.	Congestive heart failure; mitral and aortic disease; rheumatic fever	20
29	M.	Uraemia; chronic nephritis	20
30	M.	Uraemia; chronic glomerulonephritis	(more than 2 years)
31	M.	Chronic nephritis	23
41	F.	Cerebral embolism; endocarditis	30
43	M.	Nephritis	18
43	F.	Chronic nephritis	38
50	F.	Chronic nephritis	12
50	F.	Cardiac failure; mitral stenosis	40
54	F.	Mitral and aortic incompetence	(as a child)
56	F.	Right ventricular failure; mitral stenosis	(in childhood)
58	F.	Pulmonary oedema; mitral stenosis	40
58	F.	Pulmonary oedema; chronic mitral regurgitation of heart	(in childhood)
58	F.	Myocardial failure; streptococcal infection; thyrotoxicosis	43
60	F.	Cardiac failure; myocardial degeneration	50
67	M.	Mitral regurgitation chronic endocarditis	(in childhood)
69	F.	Acute pulmonary oedema; aortic stenosis	51
72	F.	Cardiac failure; mitral stenosis	(in childhood)
75	F.	Cardiac failure; acute nephritis: Hypertension	(more than 5 years)
76	M.	Mitral regurgitation; chronic endocarditis; arteriosclerosis	(more than 10 years)
87	F.	Valvular heart disease (aortic)	(in childhood)
		Diphtheria	
58	F.	Congestive heart failure; mitral stenosis	(as a child)
		Whooping cough	
7	F.	Pneumonia; bronchiectasis	6
		Measles	
5	M.	Cerebral hemiatrophy	3
13	M.	Hydrocephalus; encephalitis	9
13	M.	Convulsions and coma; encephalitis	3
29	M.	Myocardial degeneration; valvular disease of heart	21
33	M.	Spastic Paraplegia; myocarditis	28
		Rubella (German measles)	
5	F.	Encephalitis	2

Deaths following vaccination or other prophylactic inoculation

This section includes deaths classified to E940-E942, vaccinia, post-vaccinal encephalitis and other complications of smallpox vaccination, and to E943, E944, post-immunization jaundice and hepatitis and other complications of prophylactic inoculation. Deaths classified to some other condition as the underlying cause, but with vaccination either mentioned on the certificate or ascertained by enquiry to have been associated with the death, are also mentioned here.

In 1954 one death was assigned to complications of vaccination against smallpox, viz:

Male aged 3 months, certified as encephalitis. Lobar pneumonia was also mentioned on the certificate. Subsequent enquiry disclosed that patient had been vaccinated 12 days prior to admission to hospital.

There were five deaths assigned to other complications of prophylactic inoculations:

1. Male aged 2 months, certified as convulsions. Further enquiry revealed that a convulsion apparently followed an injection of protective whooping cough vaccine.
2. Male aged 28 years, certified as asphyxia due to acute allergic asthma and oedema of the tongue following injection of anti-tetanic serum in a sensitive subject. Early fatty myocarditis, purulent bronchitis, were also mentioned on the certificate.
3. Male aged 30 years, certified as failure of the peripheral circulation due to anaphylactic shock following injury to the right index finger and injection of A.T.S.
4. Male aged 36 years, certified as anaphylaxis due to administration of tetanus antitoxin. The existence of tetanus was not confirmed at P.M.
5. Female aged 50 years, certified as anaphylactic shock following A.T.S. injection for an abrasion on left knee accidentally sustained in a fall.

In addition there were two deaths in which vaccination was mentioned on the death certificate but which were assigned to other causes:—

1. Male aged 9 months, certified as intracerebral venous thrombosis following pyodermia due to Kaposi's Varicelliform eruption, with mention of vaccination in Part II of the death certificate.
2. Male aged 65 years, certified as post-vaccinal encephalitis. Arteriosclerosis was also mentioned on the death certificate. Subsequent enquiry revealed that the patient had been given an anti-typhoid inoculation (bacterial vaccine) simultaneously with anti-smallpox vaccination, but the death was completely unrelated to vaccination. The death was assigned to cerebral tumour (glioma).

Deaths in Institutions

An analysis of deaths in England and Wales in 1954 by cause of death and by the type of place where death occurred is given in Table LXXXVI (page 194). Of the total of 501,896 deaths registered, 248,303 (49 per cent) were in the deceased person's own home, 190,386 (38 per cent) were in hospitals (non-mental) belonging to the National Health Service, 13,323 (2·7 per cent) in other non-mental hospitals or nursing homes, 13,159 (2·6 per cent) in mental hospitals and mental deficiency hospitals belonging to the National Health Service and 13,489 (2·7 per cent) in other institutions (homes for the aged, schools, prisons, &c.).

The proportion of deaths in any particular class of institution varied considerably from cause to cause. Only 26 per cent of deaths due to diseases of the circulatory system took place in hospitals (non-mental) belonging to the National Health Service; about 4 per cent occurred in mental hospitals. For diseases of the digestive system the proportion in National Health Service hospitals (non-mental) was 77 per cent. The main cause of death in mental hospitals and mental deficiency hospitals was arteriosclerotic and degenerative heart disease which caused 5,529 deaths (42 per cent).

Medical Certification of Cause of Death

Proportion of bodies seen after death

The table below shows for 1954 and four earlier years the percentage of deaths which were investigated by a coroner or where the body was seen after death by the certifying practitioner, and the percentage where the certifying medical practitioner did not see the body and no coroner's enquiry took place. The figures for 1953 and 1954 are based on an examination of a sample of one medical certificate in seven.

	1928	1933	1947	1953*	1954*
Seen after death	51·0	53·7	60·9	70·8	71·5
Inquest or Coroner's P.M. without inquest or other cases reviewed by coroners	11·2	11·2	14·0	19·4	20·1
Cases certified by Medical Practitioners	39·8	42·5	46·9	51·4	51·4
Not seen after death	48·5	46·1	38·8	29·1	28·3
No statement	0·5	0·2	0·3	0·1	0·2
Total	100·0	100·0	100·0	100·0	100·0
Total deaths in year	460,389	496,465	517,615	503,529	501,896

* Estimated from a sample of medical certificates.

Both the proportion seen by certifying practitioners and the proportion investigated by coroners continued to increase. The statement by a certifying practitioner is made when he signs the medical certificate of cause of death and since there are likely to be occasions when he subsequently sees the body the proportion seen after death may be understated.

Mortality Analysis by Method of Certification

Table LXXXVII (page 197) shows the number of deaths in 1954, for 89 groups of causes divided according to the basis of the diagnosis of the cause of death, so far as that is revealed by the certificate given by the coroner or certifying medical practitioner. Of a total of 501,896 deaths, 67,156 were registered on the basis of a coroner's certificate after inquest or on the results of a post mortem examination ordered by a coroner without an inquest. In 57,987 of these deaths a post mortem examination was held.

Of the 432,107 deaths which were registered on a certificate from a certifying medical practitioner, post mortem examinations were held in 45,666 cases. 10,426 other certificates mentioned an operation having been performed for the condition resulting in death.

There was very great variation between causes in the proportions confirmed by post mortem from 2 per cent for senility and ill-defined diseases (I.S.C. Nos. 790-795, 8,185 deaths), and 10 per cent for vascular lesions of the central nervous system (I.S.C. Nos. 330-334, 72,142 deaths) to 76 per cent for diseases of the ear and mastoid process (I.S.C. Nos. 390-398, 284 deaths) and 93 per cent for abortion (I.S.C. Nos. 650-652, 76 deaths). The proportion for all causes was 21 per cent.

Table LXXXVI.—Deaths by cause and sex according to type of institution, etc., in which they occurred, England and Wales, 1954

Cause of death	Intl. Classn. No.	Total deaths		Mental hospitals and Mental deficiency hospitals				Other hospitals and institutions for the care of the sick				Other institutions		At deceased person's own home		In other private houses and other places	
				N.H.S.		Other than N.H.S.		N.H.S.		Other than N.H.S.							
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
ALL CAUSES		**259,797**	**242,099**	**5,668**	**7,491**	**223**	**380**	**105,094**	**85,292**	**4,525**	**8,798**	**6,332**	**7,157**	**125,416**	**122,887**	**12,539**	**10,094**
Infective and Parasitic Diseases	**001–138**	**7,227**	**3,766**	**329**	**186**	**14**	**4**	**3,490**	**1,955**	**89**	**39**	**46**	**25**	**3,118**	**1,467**	**141**	**90**
Tuberculosis, respiratory system	001–008	4,944	2,125	180	91	8	—	2,109	965	53	24	23	5	2,504	989	67	51
Tuberculosis, other forms	010–019	448	380	14	13	—	1	334	279	15	2	1	4	79	72	5	9
Syphilis and its sequelae	020–029	954	467	88	42	2	—	426	184	6	3	16	7	357	213	59	18
Gonococcal infection and other venereal diseases	030–039	13	—	—	—	—	—	11	—	—	—	—	—	2	—	—	—
Infectious diseases commonly arising in intestinal tract	040–049	49	34	8	2	—	—	31	30	1	—	—	—	9	2	—	—
Other bacterial diseases	050–064	330	310	11	8	—	—	251	218	—	1	—	3	64	73	4	7
Spirochaetal diseases, except syphilis	070–074	25	2	—	—	—	—	22	2	—	—	—	—	3	—	—	—
Diseases attributable to viruses	080–096	400	402	28	29	4	3	262	249	12	8	5	6	83	104	6	3
Typhus and other rickettsial diseases	100–108	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaria	110–117	9	—	—	—	—	—	8	—	—	—	—	—	1	—	—	—
Other infective and parasitic diseases	120–138	55	46	—	1	—	—	36	28	2	1	1	—	16	14	—	2
Neoplasms	**140–239**	**48,104**	**43,727**	**456**	**540**	**9**	**14**	**22,197**	**17,553**	**1,124**	**1,902**	**784**	**814**	**22,909**	**21,126**	**625**	**1,778**
Malignant neoplasm of buccal cavity and pharynx	140–148	1,516	641	18	6	—	—	611	248	32	31	67	21	771	315	17	20
Malignant neoplasm of digestive organs and peritoneum	150–159	19,616	18,317	207	226	7	5	8,650	6,869	459	772	330	344	9,698	9,241	265	862
Malignant neoplasm of respiratory system	160–165	14,888	2,681	101	40	1	—	6,431	1,258	325	108	219	35	7,618	1,123	193	117
Malignant neoplasm of breast and genito-urinary organs	170–181	6,301	16,612	47	176	1	3	3,112	6,002	163	816	103	338	2,797	8,659	78	618
Malignant neoplasm of other and unspecified sites	190–199	2,570	2,597	51	49	—	3	1,381	1,338	78	111	46	42	983	980	31	74
Neoplasms of lymphatic and haematopoietic tissues	200–205	2,422	1,934	18	15	—	3	1,479	1,184	52	38	9	20	836	605	28	69
Benign neoplasm	210–229	328	598	9	18	—	—	234	439	7	17	4	6	70	108	4	10
Neoplasm of unspecified nature	230–239	463	347	5	10	—	—	299	217	8	9	6	8	136	95	9	8
Allergic, Endocrine System, Metabolic and Nutritional Diseases	**240–289**	**2,719**	**4,303**	**46**	**82**	**4**	**3**	**1,153**	**1,942**	**49**	**95**	**42**	**81**	**1,361**	**1,956**	**64**	**144**
Allergic disorders	240–245	1,251	1,237	11	13	2	—	305	372	17	32	16	14	859	744	41	62
Diseases of thyroid gland	250–254	98	623	2	15	—	1	55	271	2	7	—	11	35	294	4	24
Diabetes mellitus	260	1,048	1,980	18	32	1	1	624	1,071	18	49	18	45	358	737	11	45
Diseases of other endocrine glands	270–277	134	201	8	14	—	1	91	114	1	6	3	6	28	54	3	6
Avitaminoses, and other metabolic diseases	280–289	188	262	7	8	1	—	78	114	11	1	5	5	81	127	5	7
Diseases of the Blood and Blood-forming Organs	**290–299**	**799**	**1,349**	**11**	**25**	**1**	—	**509**	**668**	**7**	**28**	**13**	**20**	**251**	**558**	**7**	**50**

Cause of death	Intl. Classn. No.	Total deaths		Mental hospitals and Mental deficiency hospitals				Other hospitals and institutions for the care of the sick				Other institutions		At deceased person's own home		In other private houses and other places	
				N.H.S.		Other than N.H.S.		N.H.S.		Other than N.H.S.							
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Mental, Psychoneurotic and Personality Disorders	**300 326**	**458**	**715**	**153**	**191**	**3**	**11**	**184**	**323**	**6**	**27**	**10**	**20**	**93**	**130**	**9**	**13**
Psychoses	300 309	346	611	138	178	1	10	148	291	4	24	7	18	47	80	1	10
Psychoneurotic disorders	310-318	20	35	4	3	—	—	6	12	1	2	—	—	8	15	1	3
Disorders of character, behaviour & intelligence	320-326	92	69	11	10	2	1	30	20	1	1	3	2	38	35	7	—
Diseases of the Nervous System and Sense Organs	**330-398**	**33,094**	**44,387**	**597**	**782**	**31**	**63**	**13,222**	**15,024**	**756**	**2,090**	**1,233**	**1,537**	**16,573**	**23,243**	**682**	**1,648**
Vascular lesions affecting central nervous system	330-334	30,516	41,626	425	635	25	58	11,939	13,789	697	1,958	1,125	1,405	15,661	22,185	644	1,596
Inflammatory diseases of central nervous system	340-345	683	743	17	21	—	—	465	458	13	23	23	30	157	205	8	6
Other diseases of central nervous system	350 357	1,637	1,820	146	122	5	5	628	625	45	108	84	102	706	816	23	42
Diseases of nerves and peripheral ganglia	360-369	62	53	—	—	—	—	47	45	1	1	—	—	14	7	—	—
Inflammatory diseases of eye	370-379	1	4	—	1	—	—	1	3	—	—	—	—	—	—	—	—
Other diseases and conditions of eye	380-389	20	32	—	—	—	—	13	25	—	—	—	—	7	5	—	2
Diseases of ear and mastoid process	390 398	175	109	9	3	1	—	129	79	—	—	1	—	28	25	7	2
Diseases of the Circulatory System	**400-468**	**94,675**	**91,634**	**2,789**	**4,089**	**100**	**189**	**26,072**	**22,062**	**1,383**	**3,323**	**2,835**	**3,427**	**55,300**	**54,341**	**6,196**	**4,203**
Rheumatic fever	400-402	152	147	5	4	—	—	102	91	3	—	1	1	36	47	5	4
Chronic rehumatic heart disease	410-416	3,144	5,452	44	124	2	3	1,292	2,179	36	104	47	92	1,563	2,731	160	219
Arterisoclerotic and degenerative heart disease	420-422	70,782	63,321	2,306	3,223	80	161	15,731	11,520	985	2,419	2,176	2,648	44,034	40,224	5,470	3,126
Other diseases of heart	430-434	4,028	4,096	37	62	-	1	2,096	1,683	50	128	94	120	1,661	1,948	90	154
Hypertensive disease	440-447	9,451	10,727	258	381	5	11	3,685	3,608	179	380	276	305	4,752	5,637	296	405
Diseases of arteries	450-456	6,201	6,544	115	225	13	8	2,557	2,213	115	271	238	249	3,001	3,329	162	249
Diseases of veins and other diseases of cirlatory system	460-468	917	1,347	24	70	—	5	609	768	15	21	3	12	253	425	13	46
Diseases of the Respiratory System	**470-527**	**30,714**	**19,692**	**801**	**979**	**40**	**48**	**11,779**	**6,944**	**369**	**482**	**860**	**620**	**16,254**	**9,996**	**611**	**623**
Acute upper respiratory infections	470-475	78	83	1	4	—	—	33	35	—	1	—	2	42	39	2	2
Influenza	480-483	878	933	44	20	2	2	127	110	14	16	24	35	639	705	28	45
Pneumonia	490-493	9,255	8,824	518	749	27	39	5,043	4,386	128	253	282	266	3,075	3,923	182	208
Bronchitis	500-502	17,123	8,420	164	153	10	7	5,138	1,795	183	163	494	279	10,791	5,700	343	323
Other diseases of respiratory system	510-527	3,380	1,432	74	53	1	—	1,438	618	44	49	60	38	1,707	629	56	45
Diseases of the Digestive System	**530-587**	**8,960**	**7,115**	**121**	**124**	**2**	**5**	**7,173**	**5,204**	**184**	**196**	**53**	**58**	**1,356**	**1,426**	**71**	**102**
Diseases of buccal cavity and oesophagus	530-539	114	146	6	15	—	1	83	87	3	8	2	2	15	31	5	2
Diseases of the stomach and duodenum	540-545	4,196	1,604	58	24	—	—	3,388	1,153	66	37	27	19	622	352	35	19
Appendicitis	550-553	547	422	4	6	—	—	498	361	18	15	—	1	25	38	2	1
Hernia of abdominal cavity	560-561	761	804	11	7	—	—	623	651	12	12	3	3	110	124	2	7
Other diseases of intestines and peritoneum	570 578	1,873	2,065	27	39	-	3	1,478	1,464	39	71	15	18	294	428	20	42
Diseases of liver, gallbladder and pancreas	580-587	1,469	2,074	15	33	2	1	1,103	1,488	46	53	6	15	290	453	7	31
Diseases of the Genito-Urinary System	**590-673**	**8,467**	**3,989**	**134**	**108**	**4**	**3**	**5,605**	**2,156**	**216**	**97**	**104**	**56**	**2,313**	**1,459**	**91**	**110**
Nephritis and nephrosis	590-594	2,742	2,531	53	63	3	2	1,394	1,117	67	62	32	36	1,148	1,165	45	86
Other diseases of urinary system	600-609	1,286	1,229	25	43	1	1	959	859	26	22	19	19	248	265	8	20
Diseases of male genital organs	610-617	4,439	—	56	—	—	—	3,252	—	123	—	53	—	917	—	38	—
Diseases of breast, ovary, fallopian tube and parametrium	620-626	—	56	—	2	—	—	—	48	—	4	—	—	—	1	—	1
Diseases of uterus and other female genital organs	630-637	—	173	—	—	—	—	—	132	—	9	—	1	—	28	—	3

Table LXXXVI.—*continued.*

Cause of death	Intl. Classn. No.	Total deaths		Mental hospitals and Mental deficiency hospitals				Other hospitals and institutions for the care of the sick				Other institutions		At deceased person's own home		In other private houses and other places	
				N.H.S.		Other than N.H.S.		N.H.S.		Other than N.H.S.							
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Deliveries and Complications of Pregnancy, Childbirth and the Puerperium	640–689	—	480	—	4	—	—	—	368	—	11	—	—	—	88	—	9
Complications of pregnancy	640–649	—	168	—	1	—	—	—	127	—	4	—	—	—	34	—	2
Abortion	650–652	—	76	—	—	—	—	—	55	—	—	—	—	—	17	—	4
Delivery without complication	660	—	7	—	—	—	—	—	7	—	—	—	—	—	—	—	—
Delivery with specified complication	670–678	—	148	—	—	—	—	—	126	—	4	—	—	—	16	—	2
Complications of the puerperium	680–689	—	81	—	3	—	—	—	53	—	3	—	—	—	21	—	1
Diseases of the Skin and Cellular Tissue	690–716	230	322	7	12	—	—	170	215	11	13	2	8	38	69	2	5
Infection of skin and subcutaneous tissue	690–698	92	102	5	8	—	—	68	70	5	3	1	1	12	18	1	2
Other diseases of skin and subcutaneous tissue	700–716	138	220	2	4	—	—	102	145	6	10	1	7	26	51	1	3
Diseases of the Bones and Organs of Movement	720–749	619	1,156	7	12	—	1	309	498	17	67	22	42	260	518	4	18
Arthritis and rheumatism, except rheumatic fever	720–727	355	890	2	3	—	1	154	343	8	54	15	37	175	441	1	11
Osteomyelitis and other diseases of bone and joint	730–738	162	178	3	6	—	—	106	108	7	12	3	3	41	45	2	4
Other diseases of musculoskeletal system	740–749	102	88	2	3	—	—	49	47	2	1	4	2	44	32	1	3
Congenital Malformations	750–759	2,349	2,144	21	28	4	2	1,770	1,588	46	31	10	10	443	458	55	27
Certain diseases of Early Infancy	760–776	5,703	3,797	—	—	—	—	5,009	3,297	120	79	8	12	515	367	51	42
Birth injuries, asphyxia, and infections of newborn	760–769	3,308	2,053	—	—	—	—	2,894	1,750	69	45	7	11	304	225	34	22
Other diseases peculiar to early infancy	770–776	2,395	1,744	—	—	—	—	2,115	1,547	51	34	1	1	211	142	17	20
Symptoms, Senility, and Ill-defined Conditions	780–795	3,049	5,284	62	104	7	26	907	1,290	42	209	222	338	1,720	3,154	89	163
Symptoms referable to systems or organs	780–789	85	63	1	1	—	—	39	26	3	—	—	—	33	33	9	3
Senility and ill-defined diseases	790–795	2,964	5,221	61	103	7	26	868	1,264	39	209	222	338	1,687	3,121	80	160
Accidents, Poisonings, and Violence (External Cause)	E800–E999	12,630	8,239	134	225	4	11	5,545	4,205	106	109	88	89	2,912	2,531	3,841	1,069
Railway accidents	E800–E802	249	31	—	—	—	—	72	9	—	—	—	—	—	—	177	22
Motor vehicle traffic accidents	E810–E825	3,289	1,158	8	7	—	—	2,250	803	26	3	—	1	26	15	979	329
Motor vehicle non-traffic accidents	E830–E835	134	8	—	—	—	—	53	3	3	—	—	—	17	1	61	4
Other road vehicle accidents	E840–E845	198	60	2	1	—	—	151	47	2	—	—	1	10	1	33	10
Water transport accidents	E850–E858	127	5	—	—	—	—	23	1	1	—	—	—	1	—	102	4
Aircraft accidents	E860–E866	222	3	—	—	—	—	9	—	2	—	—	—	6	—	205	3
Accidental poisoning by solid and liquid substances	E870–E888	150	165	3	4	—	—	80	94	3	2	—	—	45	59	19	6
Accidental poisoning by gases and vapours	E890–E895	326	391	—	—	—	—	45	62	—	1	1	1	207	298	73	29
Accidental falls	E900–E904	2,118	3,235	65	149	2	7	1,571	2,312	30	85	35	65	240	542	175	75
Other accidents	E910–E936	2,347	1,151	24	40	1	2	694	477	15	12	18	8	497	393	1,098	219
Complications due to non-therapeutic medical and surgical procedures	E940–E946	5	2	—	—	—	—	3	2	—	—	—	—	2	—	—	—
Therapeutic misadventure and late complications of therapeutic procedures	E950–E959	35	29	1	2	—	—	32	24	—	1	—	—	1	1	1	1
Late effects of injury and poisoning	E960–E965	154	32	5	2	—	—	67	15	10	—	3	2	65	13	4	—
Suicide and self-inflicted injury	E970–E979	3,178	1,865	26	20	1	2	469	346	14	5	17	8	1,756	1,151	895	333
Homicide and injury purposely inflicted by other persons (not in war)	E980–E985	97	104	—	—	—	—	26	10	—	—	14	3	39	57	18	34
Injury resulting from operations of war	E990–E999	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—

Table LXXXVII.—Deaths by cause and sex, according to method of certification, England and Wales, 1954

Cause of death	Intl. Classn. No.	Total deaths		Coroner						Certifying Medical Practitioner								Uncertified	
				Inquest held				Post mortem without inquest		After post mortem		Operation mentioned on death certificate		Other examination mentioned on death certificate		No examination mentioned			
				With post mortem		No post mortem													
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
All Causes		**259,797**	**242,099**	**10,839**	**5,606**	**5,388**	**3,781**	**25,021**	**16,521**	**26,181**	**19,485**	**5,507**	**4,919**	**191**	**149**	**185,108**	**190,567**	**1,562**	**1,071**
Infective and Parasitic Diseases	001–138	7,227	3,766	351	48	34	5	944	462	1,02 2	603	87	57	7	9	4,761	2,577	21	5
Tuberculosis of the respiratory system	001–008	4,944	2,125	262	16	19	2	477	147	456	183	61	37	2	4	3,656	1,734	11	2
Tuberculosis, other forms	010–019	448	380	13	3	2	1	46	29	147	126	18	17	1	1	219	203	2	—
Syphilis and its sequelae	020–029	954	467	23	4	3	—	277	166	172	74	2	2	3	1	469	218	5	2
Gonococcal infection and other venereal diseases	030–039	13	—	—	—	—	—	2	—	3	—	1	—	—	—	7	—	—	—
Infectious diseases of intestinal tract	040–049	49	34	9	6	2	—	9	2	13	10	—	—	—	1	16	15	—	—
Other bacterial diseases	050–064	330	310	20	12	4	1	76	63	91	90	2	—	1	2	134	142	2	—
Spirochaetal diseases except syphilis	070–074	25	2	8	—	2	—	3	—	6	1	—	—	—	—	6	1	—	—
Diseases attributable to viruses	080–096	400	402	14	5	2	1	42	49	111	102	—	1	—	—	230	244	1	—
Typhus and other rickettsial diseases	100–108	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaria	110–117	9	—	1	—	—	—	3	—	1	—	—	—	—	—	4	—	—	—
Other infective and parasitic diseases	120–138	55	46	1	2	—	—	9	6	22	17	3	—	—	—	20	20	—	1
Neoplasms	140–239	48,104	43,727	365	124	57	32	1,584	1,215	6,425	4,437	2,857	3,666	141	112	36,642	34,125	36	16
Neoplasms of buccal cavity and pharynx	140–148	1,516	641	7	2	—	—	37	11	80	51	48	18	1	—	1,341	559	2	—
Neoplasms of digestive organs and peritoneum	150–159	19,616	18,317	109	35	24	14	571	463	2,213	1,662	1,781	1,438	30	26	14,876	14,671	12	8
Neoplasms of respiratory system	160–165	14,888	2,681	129	6	13	3	562	105	2,149	445	348	29	59	19	11,613	2,072	15	2
Neoplasms of breast and genito-urinary system	170–181	6,301	16,612	35	29	13	5	151	318	766	1,168	480	1,909	11	31	4,841	13,147	4	5
Neoplasms of other and unspecified sites	190–199	2,570	2,597	47	14	3	5	136	148	488	422	140	161	24	19	1,730	1,828	2	—
Neoplasms of lymphatic and haematopoietic tissues	200–205	2,422	1,934	23	5	1	1	50	54	586	429	13	13	13	14	1,735	1,417	1	1
Benign neoplasms	210–229	328	598	14	27	1	4	61	109	93	209	37	89	—	1	122	159	—	—
Neoplasm of unspecified nature	230–239	463	347	1	6	2	—	13	7	50	51	10	9	3	2	384	272	—	—
Allergic, Endocrine System, Metabolic and Nutritional Diseases	240–289	2,719	4,303	25	35	4	8	174	301	318	568	37	64	—	—	2,145	3,304	16	23
Allergic disorders	240–245	1,251	1,237	4	8	1	1	68	91	64	95	—	—	—	—	1,105	1,035	9	7
Diseases of thyroid gland	250–254	98	623	4	5	1	2	15	65	15	100	2	26	—	—	58	419	3	5
Diabetes mellitus	260	1,048	1,980	5	4	1	1	42	68	145	254	33	33	—	—	818	1,611	4	9
Diseases of other endocrine glands	270–277	134	201	5	3	—	—	36	48	52	63	2	3	—	—	39	83	—	1
Avitaminoses and other metabolic diseases	280–289	188	262	7	15	1	4	13	28	42	56	—	2	—	—	125	156	—	1
Diseases of the Blood and Blood forming Organs	290–299	799	1,349	9	7	2	2	17	50	209	231	3	7	2	4	557	1,045	—	3
Mental, Psychoneurotic and Personality Disorders	300–326	458	715	35	37	7	4	21	35	39	62	6	1	—	1	349	574	1	1
Psychoses	300–309	346	611	21	29	5	3	16	26	29	44	5	1	—	1	270	506	—	1
Psychoneurotic disorders	310–318	20	35	2	—	—	—	—	4	3	12	1	—	—	—	14	19	—	—
Disorders of character, behaviour & intelligence	320–326	92	69	12	8	2	1	5	5	7	6	—	—	—	—	65	49	1	—

Table LXXXVII.—*continued.*

Cause of death	Intl. Classn. No.	Total deaths		Coroner						Certifying Medical Practitioner								Uncertified	
				Inquest held				Post mortem without inquest		After post mortem		Operation mentioned on death certificate		Other examination mentioned on death certificate		No examination mentioned			
				With post mortem		No post mortem													
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Diseases of the Nervous System and Sense Organs	**330–398**	**33,094**	**44,387**	**231**	**143**	**35**	**29**	**1,887**	**2,469**	**1,883**	**2,002**	**20**	**28**	**5**	**2**	**28,906**	**39,580**	**127**	**134**
Vascular lesions affecting central nervous system	330–334	30,516	41,626	181	109	31	26	1,676	2,294	1,479	1,676	9	7	2	—	27,024	37,389	114	125
Inflammatory diseases of central nervous system	340–345	683	743	18	3	1	—	61	49	174	145	2	4	3	1	424	539	—	2
Other diseases of central nervous system	350–357	1,637	1,820	17	18	3	3	88	78	129	121	4	1	—	1	1,384	1,591	12	7
Diseases of nerves and peripheral ganglia	360–369	62	53	—	1	—	—	3	3	26	22	—	2	—	—	32	25	1	—
Inflammatory diseases of eye	370–379	1	4	—	—	—	—	1	1	—	3	—	—	—	—	—	—	—	—
Other diseases and conditions of eye	380–389	20	32	4	7	—	—	2	4	2	4	5	11	—	—	7	6	—	—
Diseases of ear and mastoid process	390–398	175	109	11	5	—	—	56	40	73	31	—	3	—	—	35	30	—	—
Diseases of the Circulatory System	**400–468**	**94,675**	**91,634**	**1,102**	**305**	**157**	**104**	**14,828**	**8,404**	**5,567**	**4,526**	**171**	**121**	**13**	**5**	**71,681**	**77,424**	**1,156**	**745**
Rheumatic fever	400–402	152	147	8	3	—	—	18	20	58	44	—	1	—	—	68	79	—	—
Chronic rheumatic heart disease	410–416	3,144	5,452	56	28	4	5	365	468	437	720	17	36	—	1	2,257	4,179	8	15
Arteriosclerotic and degenerative heart disease	420–422	70,782	63,321	864	187	133	80	12,537	5,813	3,120	2,042	36	6	11	4	53,007	54,535	1,074	654
Other diseases of heart	430–434	4,028	4,096	46	6	4	4	194	148	413	302	—	5	—	—	3,350	3,614	21	17
Hypertensive disease	440–447	9,451	10,727	60	37	5	4	929	918	753	660	11	12	1	—	7,661	9,059	31	37
Diseases of arteries	450–456	6,201	6,544	48	18	8	6	588	676	460	342	97	49	1	—	4,980	5,437	19	16
Diseases of veins and other disease of circulatory system	460–468	917	1,347	20	26	3	5	197	361	326	416	10	12	—	—	358	521	3	6
Diseases of the Respiratory System	**470–527**	**30,714**	**19,692**	**791**	**122**	**60**	**16**	**3,132**	**1,736**	**2,888**	**1,697**	**25**	**16**	**9**	**3**	**23,748**	**16,065**	**61**	**37**
Acute upper respiratory infections	470–475	78	83	3	3	1	—	23	22	9	14	—	—	—	—	42	44	—	—
Influenza	480–483	878	933	8	4	1	—	101	49	34	30	—	—	—	—	733	848	1	2
Pneumonia	490–493	9,255	8,824	145	58	15	10	1,308	964	1,480	1,085	3	1	2	—	6,288	6,687	14	19
Bronchitis	500–502	17,123	8,420	206	25	20	5	1,072	561	883	338	4	—	—	—	14,900	7,479	38	12
Other diseases of respiratory system	510–527	3,380	1,432	429	32	23	1	628	140	482	230	18	15	7	3	1,785	1,007	8	4
Diseases of the Digestive System	**530–587**	**8,960**	**7,115**	**296**	**143**	**44**	**35**	**1,243**	**933**	**3,050**	**2,123**	**1,072**	**792**	**4**	**4**	**3,230**	**3,077**	**21**	**8**
Diseases of buccal cavity and oesophagus	530–539	114	146	11	12	1	1	13	16	36	30	6	6	—	—	46	81	1	—
Diseases of stomach and duodenum	540–545	4,196	1,604	119	23	24	4	588	247	1,477	516	578	156	3	2	1,398	655	9	1
Appendicitis	550–553	547	422	32	15	2	3	75	58	170	109	90	68	—	—	177	169	1	—
Hernia of abdominal cavity	560–561	761	804	36	19	5	9	138	132	202	190	151	136	—	—	224	318	3	—
Other diseases of intestines and peritoneum	570–578	1,873	2,065	61	40	9	7	269	270	636	588	142	178	—	—	754	976	2	6
Diseases of liver, gallbladder and pancreas	580–587	1,469	2,074	37	34	3	11	160	210	529	690	105	248	1	2	631	878	3	1
Diseases of the Genito-Urinary System	**590–673**	**8,467**	**3,989**	**101**	**42**	**20**	**5**	**446**	**236**	**1,487**	**871**	**1,144**	**86**	**8**	**6**	**5,255**	**2,739**	**6**	**4**
Nephritis and nephrosis	590–594	2,742	2,531	21	11	3	—	135	113	452	364	5	3	2	4	2,124	2,034	—	2
Other diseases of urinary system	600–609	1,286	1,229	28	17	5	3	100	89	392	432	89	31	4	2	667	653	1	2
Diseases of male genital organs	610–617	4,439	—	52	—	12	—	211	—	643	—	1,050	—	2	—	2,464	—	5	—
Diseases of breast, ovary, fallopian tube, and parametrium	620–626	—	56	—	1	—	—	—	10	—	21	—	10	—	—	—	14	—	—
Diseases of uterus and other female genital organs	630–637	—	173	—	13	—	2	—	24	—	54	—	42	—	—	—	38	—	—

Table LXXXVII *continued.*

Cause of death	Intl. Classn. No.	Total deaths		Coroner						Certifying Medical Practitioner								Uncertified	
				Inquest held				Post mortem without inquest		After post mortem		Operation mentioned on death certificate		Other examination mentioned on death certificate		No examination mentioned			
				With post mortem		No post mortem													
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Deliveries and Complications of Pregnancy, Childbirth and the Puerperium	640–689	—	480	—	100	—	10	—	112	—	129	—	11	—	—	—	118	—	—
Complications of pregnancy	640–649	—	168	—	11	—	3	—	44	—	51	—	4	—	—	—	55	—	—
Abortion	650–652	—	76	—	52	—	2	—	11	—	8	—	—	—	—	—	3	—	—
Delivery without complication	660	—	7	—	—	—	1	—	1	—	3	—	2	—	—	—	—	—	—
Delivery with specified complication	670–678	—	148	—	32	—	4	—	37	—	35	—	4	—	—	—	36	—	—
Complications of the puerperium	680–689	—	81	—	5	—	—	—	19	—	32	—	1	—	—	—	24	—	—
Diseases of the Skin and Cellular Tissue	690–716	230	322	10	1	1	2	10	17	53	68	2	1	—	1	154	232	—	—
Infections of skin and subcutaneous tissue	690–698	92	102	6	1	—	1	7	6	31	28	1	1	—	—	47	65	—	—
Other disease of skin and subcutaneous tissue	700–716	138	220	4	—	1	1	3	11	22	40	1	—	—	1	107	167	—	—
Diseases of the Bones and Organs of Movement	720–749	619	1,156	22	19	2	7	30	34	70	78	12	10	—	—	483	1,008	—	—
Arthritis and rheumatism, except rheumatic fever	720–727	355	890	12	6	—	3	7	8	26	36	8	7	—	—	302	830	—	—
Osteomyelitis and other diseases of bone & joint	730–738	162	178	7	11	2	4	19	19	28	28	3	2	—	—	103	114	—	—
Other diseases of musculoskeletal system	740–749	102	88	3	2	—	—	4	7	16	14	1	1	—	—	78	64	—	—
Congenital Malformations	750–759	2,349	2,144	34	11	9	3	279	204	874	664	49	36	1	1	1,093	1,218	10	7
Certain Diseases of Early Infancy	760–776	5,703	3,797	32	15	1	4	298	188	2,235	1,375	2	—	—	—	3,088	2,189	47	26
Birth injuries, asphyxia, and infections of newborn	760–769	3,308	2,053	28	13	1	2	245	163	1,720	1,011	1	—	—	—	1,298	856	15	8
Other diseases peculiar to early infancy	770–776	2,395	1,744	4	2	—	2	53	25	515	364	1	—	—	—	1,790	1,333	32	18
Symptoms, Senility, and Ill-defined Conditions	780–795	3,049	5,284	53	29	7	5	20	28	26	19	—	—	1	—	2,909	5,162	33	41
Symptoms referable to systems or organs	780–789	85	63	5	4	—	—	8	9	11	5	—	—	1	—	39	29	21	16
Senility and ill-defined diseases	790–795	2,964	5,221	48	25	7	5	12	19	15	14	—	—	—	—	2,870	5,133	12	25
Accidents, Poisonings and Violence (External Cause)	E800–E999	12,630	8,239	7,382	4,425	4,948	3,510	111	97	35	32	20	23	—	1	107	130	27	21
Railway accidents	E800–E802	249	31	128	17	120	14	—	—	—	—	—	—	—	—	—	—	1	—
Motor vehicle traffic accidents	E810–E825	3,289	1,158	1,952	716	1,327	442	1	—	—	—	—	—	—	—	5	—	4	—
Motor vehicle non-traffic accidents	E830–E835	134	8	72	6	62	2	—	—	—	—	—	—	—	—	—	—	—	—
Other road vehicle accidents	E840–E845	198	60	122	42	76	18	—	—	—	—	—	—	—	—	—	—	—	—
Water transport accidents	E850–E858	127	5	84	3	43	2	—	—	—	—	—	—	—	—	—	—	—	—
Aircraft accidents	E860–E866	222	3	40	1	173	2	—	—	—	—	—	—	—	—	4	—	5	—
Accidental poisoning by solid and liquid substances	E870–E888	150	165	135	147	12	17	1	—	—	1	—	—	—	—	1	—	1	—
Accidental poisoning by gases and vapours	E890–E895	326	391	283	333	41	58	1	—	—	—	—	—	—	—	—	—	1	—
Accidental falls	E900–E904	2,118	3,235	1,069	1,168	978	1,893	17	47	1	1	4	8	—	1	42	101	7	16
Other accidents	E910–E936	2,347	1,151	1,460	675	777	394	71	42	17	20	2	2	—	—	12	13	8	5
Complications due to non-therapeutic medical and surgical procedures	E940–E946	5	2	3	2	—	—	—	—	—	—	—	—	—	—	2	—	—	—
Therapeutic misadventure and late complications of therapeutic procedures	E950–E959	35	29	6	9	1	—	6	2	9	10	13	8	—	—	—	—	—	—
Late effects of injury and poisoning	E960–E965	154	32	72	5	23	4	9	2	8	—	1	5	—	—	41	16	—	—
Suicide and self-inflicted injury	E970–E979	3,178	1,865	1,878	1,210	1,295	651	5	4	—	—	—	—	—	—	—	—	—	—
Homicide and injury purposely inflicted by other persons (not in war)	E980–E985	97	104	78	91	19	13	—	—	—	—	—	—	—	—	—	—	—	—
Injury resulting from operations of war	E990–E999	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—

ADVISORY COMMITTEE ON MEDICAL NOMENCLATURE AND STATISTICS

Report (dated 27th November, 1954) on the Work of the Committee, November, 1952, to October, 1954

Introductory

This is the third report on the Committee's work, each report covering a period of two years. There have been no changes in membership of the main Committee during the period covered by the present report.

The Sub-Committee on the Reporting and Indexing of Hospital Diagnoses concluded its work and presented its report to the main Committee. The Sub-Committee on Cancer Registration completed its immediate duties in advising on the simplification of the cards and procedure used in the Cancer Registration Scheme, but the Sub-Committee continues, with slightly modified membership and slightly extended terms of reference, to advise on cancer statistics generally and on the presentation of the results of cancer registration in particular. The Sub-Committee on Statistics has presented its first report on the subject of measurement of morbidity, but will, inter alia, be continuing to study different aspects of the subject. In February, 1954, a joint Sub-Committee with the Medical Research Council's Climatic Physiology Committee began to consider proposals for modifying the classification of heat illnesses.

The present report deals with each main subject considered by the Committee during the two years, bringing the account of its work on subjects referred to in earlier reports up to date and introducing new subjects with which they have been concerned.

Code of Operational Procedures

Further revision of the draft code previously prepared has taken place. Arrangements are being made for publishing the revised code* for use in hospitals in England and Wales and a copy has been sent to the World Health Organization for consideration as a basis for preparing an international code.

Code of Anæsthetic Procedures

The draft code approved by the Committee for trial in 1952 required complete re-casting after it had been tried out in three hospitals. A revised code has now been prepared and has been incorporated, as a supplement, in the Code of Operational Procedures.

Adaptation of the International Classification for use as a Diagnostic Index

The Sub-Committee on this subject reported that the International Classification appeared to be generally suitable for a diagnostic index. To assist those hospitals which might wish to sub-divide categories in the Classification, the Sub-Committee prepared a memorandum of guidance explaining how this could best be done without violating the principles on which the Classification was constructed; copies of this memorandum were circulated to hospitals in this country by the Ministry of Health and a copy was sent to the World Health Organization with a suggestion that the principles set out might be incorporated in the next revision of the International Classification.

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* Code of Surgical Operations, published 1956, H.M.S.O., price 15s. 0d. net.

Classification of Heat Illnesses

A joint Sub-Committee with the Medical Research Council's Climatic Physiology Committee was appointed to consider proposals, put forward by a member of the latter Committee, for establishing a new classification of heat illnesses. These proposals were, in general, too detailed to be suggested for incorporation in the International Classification, but the Sub-Committee proposed modifications which would bring them within the framework of the International Classification and suggested minor modifications of the International Classification which might be incorporated in the seventh revision. These suggestions have been sent to the World Health Organization and the Sub-Committee is considering whether more radical changes should be recommended for the eighth revision.

Seventh Revision of the International Classification

It had been proposed by the World Health Organization's Expert Committee on Health Statistics that the timing of decennial revision of the Classification should be modified so that revised classifications could be introduced in years ending in "8", enabling the periods around national census dates to be covered by a uniform classification. The Expert Committee had also proposed that the Seventh Revision should take place in 1955 and that it should be limited to such changes from the Sixth Revision as were essential.

The Committee considered these proposals and specific proposals for changes made by an Advisory Group to the World Health Organization. In the light of views expressed by the Committee and by other interested bodies which were consulted, some further suggestions were submitted to W.H.O. by the United Kingdom. The Committee are considering the final list of revision proposals which W.H.O. are submitting to the Revision Conference.

International Conferences

An International Conference on Health and Vital Statistics convened by the World Health Organization under the Presidency of Sir Russell Brain was held at Somerset House in October, 1953. The Committee was represented at this Conference and Professor Bradford Hill was elected Chairman of the Conference. Many subjects with which the Committee has been concerned were discussed and a valuable exchange of views took place. A report of the Conference and a number of the Papers prepared for it have been published by W.H.O. (1) (2).

It has been proposed by the World Health Organization Expert Committee on Health Statistics that a number of general topics relating to health statistics should be considered at the Seventh Revision Conference, to be held in February, 1955. The Committee have considered the subjects proposed for discussion and have made certain suggestions on matters relating to them.

Measurement of Morbidity

The Statistics Sub-Committee continued to consider what rates and other measures are most suitable for use in morbidity statistics, how these should be defined and what they should be called. They presented their first report on the subject in July, 1954, setting out proposed rates of "inception" of sickness, rates of "prevalence", measures of duration and measures of fatality and indicating uses to which these rates could be put in relation to different sources of information about morbidity. The main Committee advised that

this report should be published; this has been done. (3) The Sub-Committee will be considering further the problem of measuring morbidity in relation to "longitudinal" surveys, an aspect of the problem which is not covered in their first report.

Accuracy of Death Certification

The Committee considered the view sometimes expressed by individual pathologists that certification of causes of death not based on post-mortem examination is unreliable and that the resulting statistics may therefore be of doubtful value. The Committee were not prepared to accept this view without further enquiry, and advised that an attempt should be made to collect evidence from a number of hospitals which might indicate the degree of reliability of diagnoses based on evidence available before post-mortem examination compared with those based on evidence available after post-mortem examination. Several members of the Committee are helping the General Register Office in initiating an investigation on these lines.

The suggestions, referred to in the last report, that copies of the World Health Organization's booklet on medical certification of cause of death (4) should be issued to all newly qualified doctors has been put into effect. Further suggestions that copies of this booklet should be issued to all pathologists and that copies of a note on "Death Certification", published in the British Medical Journal (5), should be issued to certifying doctors with books of medical certificates, have also been adopted. The Committee emphasised the importance of post mortem facilities being readily available for all deaths in which the precise cause was doubtful.

Cancer Registration

The previous report referred to the view of the Sub-Committee on Cancer Registration that a further attempt to achieve complete registration of cancer cases should be made and that the abstract card used for the scheme should be simplified to assist in this. The whole question of the future of cancer registration was then referred to the Minister of Health's Standing Advisory Committee on Cancer and Radiotherapy who recommended that registration with a simplified card should continue for all sites of cancer on a voluntary basis and that a concentrated effort should be made to achieve complete registration in a few regions. The Registrar General's Committee endorsed these recommendations and the Sub-Committee then proceeded to design a simplified card which was adopted for use for cases registered in 1954. The Sub-Committee also advised on the instructions to be issued to registering centres. In February, 1954, the Minister of Health asked for reports from Regional Hospital Boards and Boards of Governors about plans for developing cancer registration. As a result it seems likely that a number of regions will be operating full regional schemes in the near future.

Other Morbidity Enquiries

The extension of the *Hospital In-patient Enquiry*, hoped for in the last report, has not yet taken place, but the future of the Enquiry has been reviewed and there is some prospect of its extension to several complete regions in the course of the next year.*

The scheme for collecting *Mental Health Statistics* has been simplified and re-organised to provide a basis for compiling a central register of patients admitted to mental hospitals and mental deficiency hospitals which will assist in providing more complete information about the history of mental illness causing more than one admission to hospital.

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* This extension did in fact take place during the early months of 1955.

Recording for the pilot enquiry for deriving statistics from *General Practitioners' Records* ended in March, 1954. Preliminary plans for a more extensive enquiry in collaboration with the College of General Practitioners have been considered by the Committee.

Further to a suggestion made at a meeting of the Committee in 1949, arrangements were made with the Ministry of Health in 1953 for the General Register Office to collect information from the records of six *mass miniature radiography* units with a view to trying out a method of deriving more detailed statistics from such records. This trial was successful and the method was extended to all units in July, 1954.

Presentation of Medical Statistics

The advice of the Committee was obtained on a number of points relating to the form or presentation of the morbidity statistics collected by the General Register Office and also of the incapacity statistics collected by the Ministry of National Insurance. Matters relating to the publication of mortality statistics, including those relating to occupational mortality, were also referred to the Committee.

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(3) Studies on Medical and Population Subjects, No. 8. Measurement of Morbidity. H.M.S.O. Price 1*s.* 6*d.* net.
(4) Bull. Wld. Hlth. Org. Supplement 3, 1952. Price 1*s.* 6*d.*
(5) Logan, W. P. D., Brit. Med. J., 1953, 1, 1272.

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GREAT BRITAIN AND IRELAND

Vital Statistics

Table A1 of Part II shows the populations, by sex, for Great Britain and Ireland as a whole and the constituent countries in respect of each census since 1821, and mid-year estimates from 1918.

Population estimates (i.e. of people actually in the country), marriage, live birth, death and infant mortality rates for the current year are shown in Table W. They are repeated, with comparative rates for earlier years, in Table LXXXVIII.

Table LXXXVIII.—Vital Statistics: 1938, 1946 to 1954, Great Britain and Ireland

	Great Britain and Ireland	England	Wales (*including Monmouthshire*)	Scotland	Northern Ireland	Irish Republic*
Estimated Mid-year Home Population (in thousands)						
1954 Males	25,902	20,016	1,272	2,447	676	1,491
1954 Females	27,815	21,657	1,329	2,676	711	1,442
1954 Persons	53,717	41,673	2,601	5,123	1,387	2,933
Marriages †						
1954	408,617	322,153	19,578	41,975	9,154	15,757
Persons marrying per 1,000 living						
1938	16·8	17·6	16·2	15·5	13·4	10·1
1946–1950 ..	17·1	17·7	17·4	16·9	13·9	11·0
1951	16·0	16·5	16·0	16·2	13·7	10·7
1952	15·6	15·9	15·9	16·1	13·5	10·7
1953	15·3	15·7	15·4	16·0	13·6	10·6
1954	15·2	15·5	15·1	16·4	13·2	10·7
Live Births † ‡						
1954	856,666	633,395	40,256	92,315	28,803	61,897
Per 1,000 living						
1938	15·7	15·1	15·3	17·7	20·0	19·4
1946–1950 ..	18·5	18·0	17·9	19·8	22·0	22·2
1951	16·1	15·4	16·0	17·7	20·7	21·2
1952	16·1	15·3	16·0	17·7	20·9	21·8
1953	16·2	15·5	16·0	17·8	20·9	21·1
1954	15·9	15·2	15·5	18·0	20·8	21·1

* The Irish Republic rates are based on Home population throughout.

† The Marriage and Live Birth rates for 1938 and 1951 onwards are based on Home populations. For the 1946-50 aggregate they are based on Total populations.

‡ England and Wales : occurrences. Remainder : registrations.

Table LXXXVIII.—*continued.*

	Great Britain and Ireland	England	Wales (*including Monmouthshire*)	Scotland	Northern Ireland	Irish Republic*
			Deaths §			
1954	613,970	469,074	32,822	61,380	15,124	35,570
Per 1,000 living						
1931–1938‖ ..	12·4	12·0	12·9	13·3	14·4	14·2
1946–1950 ..	11·9	11·7	12·6	12·5	11·9	13·3
1951	12·7	12·5	13·9	12·9	12·8	14·3
1952	11·4	11·3	12·0	12·0	10·8	11·9
1953	11·4	11·4	12·1	11·5	10·7	11·7
1954	11·4	11·3	12·6	12·0	10·9	12·1
			Infant Mortality (deaths of infants under one year of age ¶)			
1954	23,317	15,889	1,271	2,861	951	2,345
Per 1,000 live births						
1938	55	53	57	70	75	67
1946–1950 ..	39	36	42	47	48	57
1951	32	29	36	37	41	45
1952	30	27	33	35	39	41
1953	28	27	31	31	38	39
1954	27	25	32	31	33	38

* The Irish Republic rates are based on Home population throughout.

§ The death rates are based on total deaths and Home populations, except for the years 1946–49 in the 1946–50 aggregate where they are based on civilian deaths and Civilian populations.

‖ The aggregate 1931–38 is given since crude death rates in 1938 were rather lower than in adjacent years.

¶ England and Wales: deaths per 1,000 related live births. Remainder : deaths per 1,000 births registered in the year.

Population

The combined Home population of Great Britain and Ireland at mid-1954 was estimated at 53,717,000: an increase of one per cent above the total of the 1951 Census figures. The corresponding increase for England was 1·2 per cent; for Wales a little less than 0·1 per cent; for Scotland 0·5 per cent; and for Northern Ireland 1·2 per cent. The population of the Irish Republic has now fallen below the 1951 Census figure by 0·9 per cent.

Marriage Rates

The crude marriage rates declined a little in 1954 compared with 1953 in all the countries except Scotland, where the rate was the highest since 1948, and the Irish Republic, where the rate returned to the level of 1951-52 after a small downward fluctuation in 1953. Scotland and the Irish Republic were also the only two of the countries where the crude marriage rate was above the 1938 level.

Crude marriage rates, however, are somewhat misleading since they are based on total population of all ages among whom only the single, widowed, and divorced of marriageable age are at risk, and this component has been reduced by the high marriage rates experienced in recent years. The detailed analysis in the Marriage chapter of this volume shows that, in relation to the unmarried population, marriage incidence in England and Wales is still higher than before the war.

Birth Rates

The crude birth rates which prior to 1951 had been declining from their post-war peak, reached in all the countries in 1947, have since been subject to very small movement. The rates for 1954 are only a little above those for 1938, except for the Irish Republic where there is still an excess of about 9 per cent, a considerably larger margin than elsewhere.

Death Rates

The crude death rates in 1954 were slightly higher than in the previous year in all countries except England where there was a relatively insignificant downward fluctuation. The rise in the Scottish and Welsh rates amounted to as much as 0·5 in each case.

Infant Mortality Rates

The death rates of infants under one year of age per thousand live births were, with the exception of Wales, the lowest ever recorded; the change in the Welsh rate was mainly due to rounding (31·5 in 1954 and 31·3 in 1953). The individual rates were 25 in England, 31 in Scotland, 32 in Wales, 33 in Northern Ireland and 38 for the Irish Republic.

Causes of Death

Numbers of deaths and crude death rates by cause in 1954 are available for the United Kingdom as a whole and for the constituent countries but are not available for the Irish Republic. Table LXXXIX gives these statistics for a short list of causes.

In relation to rates for the United Kingdom as a whole, mortality from respiratory tuberculosis was high in both sexes in Wales and among women in Scotland. Mortality from cancer of the stomach was higher in both sexes in Wales, while mortality from cancer of the lung was lower; mortality from cancer of the breast (female) was notably lower in Northern Ireland. The latter area had the highest rates for acute rheumatic fever but, together with Scotland, the lowest for chronic rheumatic heart disease. Death rates for coronary and myocardial disease tended to be higher in Scotland, but relatively fewer deaths were assigned to hypertension.

In Wales lower mortality from pneumonia was recorded for both sexes but death rates for bronchitis were much higher. Death rates for both these respiratory causes were low in Scotland. Northern Ireland experienced low bronchitis mortality but the pneumonia rates were similar to those for the United Kingdom as a whole. Mortality in males from "other respiratory" causes which include pneumoconiosis, bronchiectasis, and other pulmonary and pleural diseases, was much above average in Wales.

Large differences were recorded in the proportions of deaths assigned to senility, arising from differences in certification and classification between the countries.

Mortality from motor vehicle accidents showed no large variations, but the rates for fatal accidents of other kinds were notably higher in Scotland (each sex) and in Wales (males). The suicide rates for each sex were highest in England, lower in Wales, lower still in Scotland, and lowest in Northern Ireland.

This pattern of geographical variation is not markedly different from that of previous years.

Table LXXXIX.—Deaths and death rates per million living, by cause and sex, 1954. United Kingdom and its divisions.

Cause of Death (and International classification numbers)	Sex	Deaths						Death Rates per million living					
		United Kingdom	Great Britain	England	Wales	Scotland	Northern Ireland	United Kingdom	Great Britain	England	Wales	Scotland	Northern Ireland
All Causes	M.	**299,037**	**291,290**	**241,967**	**17,830**	**31,493**	**7,747**	**12,250**	**12,273**	**12,089**	**14,017**	**12,870**	**11,460**
	F.	**279,363**	**271,986**	**227,107**	**14,992**	**29,887**	**7,377**	**10,593**	**10,599**	**10,487**	**11,281**	**11,169**	**10,376**
Tuberculosis of respiratory system (001–008)	M.	5,696	5,561	4,513	431	617	135	233	234	225	339	252	200
	F.	2,579	2,518	1,944	181	393	61	98	98	90	136	147	86
Tuberculosis, other forms (010–019)	M.	549	519	413	35	71	30	22	22	21	28	29	44
	F.	452	427	349	31	47	25	17	17	16	23	18	35
Syphilis and its sequelæ (020–029)	M.	1,050	1,025	904	50	71	25	43	43	45	39	29	37
	F.	512	505	445	22	38	7	19	20	21	17	14	*10*
Typhoid fever (040)	M.	1	1	1	—	—	—	*0*	*0*	*0*	—	—	—
	F.	4	4	3	—	1	—	*0*	*0*	*0*	—	*0*	—
Cholera (043)	M.	—	—	—	—	—	—	—	—	—	—	—	—
	F.	—	—	—	—	—	—	—	—	—	—	—	—
Dysentery, all forms (045–048)	M.	25	24	20	2	2	1	1	1	1	*2*	*1*	*1*
	F.	23	22	16	1	5	1	1	1	*1*	*1*	*2*	*1*
Scarlet fever and streptococcal sore throat (050–051)	M.	24	23	22	1	—	1	1	1	1	*1*	—	*1*
	F.	31	30	26	3	1	1	1	1	1	*2*	*0*	*1*
Diphtheria (055)	M.	3	3	3	—	—	—	*0*	*0*	*0*	—	—	—
	F.	7	7	6	—	1	—	*0*	*0*	*0*	—	*0*	—
Whooping cough (056)	M.	84	80	56	10	14	4	3	3	3	*8*	*6*	*6*
	F.	88	84	63	10	11	4	3	3	3	*8*	*4*	*6*
Meningococcal infections (057)	M.	171	167	133	5	29	4	7	7	7	*4*	12	*6*
	F.	135	133	112	9	12	2	5	5	5	*7*	*4*	*3*
Plague (058)	M.	—	—	—	—	—	—	—	—	—	—	—	—
	F.	—	—	—	—	—	—	—	—	—	—	—	—
Acute poliomyelitis (080)	M.	89	87	69	4	14	2	4	4	3	*3*	*6*	*3*
	F.	48	46	38	1	7	2	2	2	2	*1*	*3*	*3*
Smallpox (084)	M.	—	—	—	—	—	—	—	—	—	—	—	—
	F.	—	—	—	—	—	—	—	—	—	—	—	—
Measles (085)	M.	35	33	27	2	4	2	1	1	1	*2*	*2*	*3*
	F.	26	25	21	—	4	1	1	1	1	—	*1*	*1*
Typhus and other rickettsial diseases (100–108)	M.	—	—	—	—	—	—	—	—	—	—	—	—
	F.	—	—	—	—	—	—	—	—	—	—	—	—

Table LXXXIX.—*continued.*

Cause of Death (and International classification numbers)	Sex	Deaths						Death Rates per million living					
		United Kingdom	Great Britain	England	Wales	Scotland	Northern Ireland	United Kingdom	Great Britain	England	Wales	Scotland	Northern Ireland
Malaria (110–117)	M.	9	9	6	3	—	—	*0*	*0*	*0*	*2*	—	—
	F.	—	—	—	—	—	—	—	—	—	—	—	—
All other diseases classified as infective and parasitic (Rem. of 001–138)	M.	609	584	467	50	67	25	25	25	23	39	27	37
	F.	564	541	459	26	56	23	21	21	21	20	21	32
Malignant neoplasms (140–205)	M.	53,872	52,791	44,406	2,907	5,478	1,081	2,207	2,224	2,219	2,285	2,239	1,599
	F.	48,868	47,809	40,258	2,524	5.027	1,059	1,853	1,863	1,859	1,899	1,879	1,489
Malignant neoplasm of stomach (151)	M.	8,973	8,767	7,168	680	919	206	368	369	358	535	376	305
	F.	7,212	7,040	5,776	490	774	172	273	274	267	369	289	242
Malignant neoplasm of trachea, bronchus and lung (162, 163)	M.	15,720	15,512	13,302	693	1,517	208	644	654	665	545	620	308
	F.	2,686	2,631	2,252	84	295	55	102	103	104	63	110	77
Malignant neoplasm of breast (170)	M.	89	86	72	8	6	3	4	4	4	*6*	*2*	*4*
	F.	9,413	9,244	7,915	446	883	169	357	360	365	336	330	238
Malignant neoplasm of uterus (171–174)	F.	4,403	4,322	3,599	247	476	81	167	168	166	186	178	114
Leukæmia and aleukæmia (204)	M.	1,328	1,291	1,090	52	149	37	54	54	54	41	61	55
	F.	1,136	1,116	953	65	98	20	43	43	44	49	37	28
Other malignant and lymphatic neoplasms (Remainder of 140–205)	M.	27,762	27,135	22,774	1,474	2,887	627	1,137	1,143	1,138	1,159	1,180	928
	F.	24,018	23,456	19,763	1,192	2,501	562	911	914	913	897	935	790
Benign and unspecified neoplasms (210–239)	M.	853	841	741	50	50	12	35	35	37	39	20	*18*
	F.	1,047	1,018	882	63	73	29	40	40	41	47	27	41
Diabetes mellitus (260)	M.	1,212	1,176	990	58	128	36	50	50	49	46	52	53
	F.	2,365	2,297	1,866	114	317	68	90	90	86	86	118	96
Anæmias (290–293)	M.	718	691	564	48	79	27	29	29	28	38	32	40
	F.	1,376	1,321	1,065	87	169	55	52	51	49	65	63	77
Vascular lesions affecting central nervous system (330–334) ..	M.	35,372	34,469	28,341	2,175	3,953	903	1,449	1,452	1,416	1,710	1,615	1,336
	F.	48,418	47,235	38,895	2,731	5,609	1,183	1,836	1,841	1,796	2,055	2,096	1,664
Nonmeningococcal meningitis (340)	M.	250	248	194	18	36	2	10	10	10	*14*	15	*3*
	F.	172	164	133	8	23	8	7	6	6	*6*	9	*11*
Rheumatic fever (400–402) ..	M.	187	172	138	14	20	15	8	7	7	*11*	8	*22*
	F.	197	176	138	9	29	21	7	7	6	*7*	11	30

Table LXXXIX.—*continued.*

Cause of Death (and International classification numbers)	Sex	Deaths						Death Rates per million living					
		United Kingdom	Great Britain	England	Wales	Scotland	Northern Ireland	United Kingdom	Great Britain	England	Wales	Scotland	Northern Ireland
Chronic rheumatic heart disease (410–416)	M.	3,522	3,467	2,916	228	323	55	144	146	146	179	132	81
	F.	6,081	5,989	5,062	390	537	92	231	233	234	293	201	129
Arteriosclerotic heart diseases, including coronary disease (420)	M.	M. 82,126 F. 73,236	47,803	39,666	2,721	5,416	M. 2,149 F. 1,856	M. 3,364 F. 2,777	2,014	1,982	2,139	2,213	M. 3,179 F. 2,610
	F.		27,682	23,172	1,342	3,168			1,079	1,070	1,010	1,184	
Degenerative heart disease (421, 422)	M.		32,174	26,408	1,987	3,779			1,356	1,319	1,562	1,544	
	F.		43,698	36,448	2,359	4,891			1,703	1,683	1,775	1,828	
Other diseases of heart (430–434)	M.	4,876	4,606	3,802	226	578	270	200	194	190	178	236	399
	F.	4,989	4,726	3,850	246	630	263	189	184	178	185	235	370
Hypertension with heart disease (440–443)	M.	6,155	5,965	5,214	325	426	190	252	251	260	256	174	281
	F.	7,342	7,116	6,091	383	642	226	278	277	281	288	240	318
Hypertension without mention of heart (444–447)	M.	4,389	4,308	3,626	286	396	81	180	182	181	225	162	120
	F.	4,777	4,690	3,950	303	437	87	181	183	182	228	163	122
Other circulatory diseases (450–468)	M.	8,085	7,939	6,660	458	821	146	331	334	333	360	336	216
	F.	8,861	8,724	7,455	436	833	137	336	340	344	328	311	193
Influenza (480–483)	M.	1,002	953	811	67	75	49	41	40	41	53	31	72
	F.	1,070	1,034	839	94	101	36	41	40	39	71	38	51
Pneumonia (490–493)	M.	10,449	10,159	8,780	475	904	290	428	428	439	373	369	429
	F.	9,929	9,648	8,448	376	824	281	376	376	390	283	308	395
Bronchitis (500—502)	M.	18,615	18,328	15,914	1,209	1,205	287	763	772	795	950	492	425
	F.	9,232	9,058	7,928	492	638	174	350	353	366	370	238	245
Other diseases of respiratory system (470–475, 510–527) ..	M.	3,937	3,869	2,883	575	411	68	161	163	144	452	168	101
	F.	1,741	1,687	1,431	84	172	54	66	66	66	63	64	76
Ulcer of stomach and duodenum (540, 541)	M.	4,587	4,503	3,823	188	492	84	188	190	191	148	201	124
	F.	1,652	1,631	1,411	56	164	21	63	64	65	42	61	30
Appendicitis (550–553)	M.	608	596	511	36	49	12	25	25	26	28	20	*18*
	F.	486	479	399	23	57	7	18	19	18	17	21	*10*
Intestinal obstruction and hernia (560–561, 570)	M.	1,725	1,674	1,381	81	212	51	71	71	69	64	87	75
	F.	1,698	1,634	1,358	80	196	64	64	64	63	60	73	90
Gastritis, enteritis and diarrhœa except diarrhœa of new-born (543, 571–572)	M.	1,172	1,110	887	79	144	62	48	47	44	62	59	92
	F.	1,444	1,401	1,184	80	137	43	55	55	55	60	51	60

Table LXXXIX.—*continued.*

Cause of Death (and International classification numbers)	Sex	Deaths						Death Rates per million living					
		United Kingdom	Great Britain	England	Wales	Scotland	Northern Ireland	United Kingdom	Great Britain	England	Wales	Scotland	Northern Ireland
Cirrhosis of liver (581)	M.	742	727	602	30	95	15	30	31	30	24	39	*22*
	F.	643	622	497	38	87	21	24	24	23	29	33	30
Nephritis and nephrosis (590–594)	M.	3,106	3,019	2,493	249	277	87	127	127	125	196	113	129
	F.	2,910	2,824	2,306	225	293	86	110	110	106	169	109	121
Hyperplasia of prostate (610) ..	M.	4,911	4,764	3,936	398	430	147	201	201	197	313	176	217
Complications of pregnancy, child-birth and puerperium (640–689)	F.	571	550	441	39	70	21	22	21	20	29	26	30
Congenital malformations (750–759)	M.	2,816	2,702	2,195	154	353	114	115	114	110	121	144	169
	F.	2,568	2,467	1,980	164	323	101	97	96	91	123	121	142
Birth injuries, postnatal asphyxia and atelectasis (760–762) ..	M.	3,265	3,138	2,535	170	433	127	134	132	127	134	177	188
	F.	2,006	1,925	1,543	105	277	81	76	75	71	79	104	114
Diarrhœa of new-born (764) ..	M.	M. 649	26	19	3	4	M. 18	M. 27	1	*1*	*2*	*2*	M. *27*
	F.	F.	20	17	1	2	F.	F.	1	*1*	*1*	*1*	F.
Other infections of new-born (763, 765–768)	M.	408	605	472	37	96	10	15	25	24	29	39	*14*
	F.		378	304	27	47			15	14	20	18	
Other diseases of early infancy, and immaturity unqualified (770—776)	M.	3,024	2,867	2,284	183	400	157	124	121	114	144	163	232
	F.	2,197	2,090	1,641	159	290	107	83	81	76	120	108	150
Senility without mention of psychosis, ill-defined and unknown causes (790–795)	M.	4,212	3,853	2,729	320	804	359	173	162	136	252	329	531
	F.	6,598	6,114	4,790	494	830	484	250	238	221	372	310	681
All other diseases (Remainder 001–795)	M.	9,655	9,342	7,657	607	1,078	313	396	394	383	477	441	463
	F.	12,582	12,185	10,051	729	1,405	397	477	475	464	549	525	558
Motor vehicle accidents (E810–E835)	M.	3,930	3,806	3,204	219	383	124	161	160	160	172	157	183
	F.	1,350	1,309	1,119	47	143	41	51	51	52	35	53	58
All other accidents (E800–E802, E840–E962)	M.	7,044	6,898	5,366	486	1,046	146	289	291	268	382	427	216
	F.	5,989	5,865	4,805	299	761	124	227	229	222	225	284	174
Suicide and self-inflicted injury (E963, E970–E979)	M.	3,416	3,380	3,021	157	202	36	140	142	151	123	83	53
	F.	1,977	1,965	1,773	92	100	12	75	77	82	69	37	*17*
Homicide and operations of war (E964, E965, E980–E999) ..	M.	210	205	164	13	28	5	9	9	8	*10*	11	*7*
	F.	114	113	95	9	9	1	4	4	4	*7*	*3*	*1*

INTERNATIONAL CO-OPERATION IN POPULATION AND HEALTH STATISTICS

United Nations

Population Commission

This Commission, like the Statistical Commission, now meets in alternate years. It did not meet in 1954. Reference to its meeting in 1953 will be found in the corresponding volume of this Review for that year (pages 234-235).

Statistical Commission

The Eighth Session of the Statistical Commission was held in Geneva from the 5th to the 22nd of April, 1954. The United Kingdom was represented by Mr. H. Campion, Director of the Central Statistical Office. The following paragraphs refer briefly to the main points of demographic interest in the Commission's report[1].

On the question of *population censuses* several members gave examples of ways in which the recommendations formulated by the Population and Statistical Commissions had helped individual countries in their census work. With regard to the timing of population censuses, the Commission advocated the desirability of as many countries as possible taking a census of population in 1960 or 1961.

The Commission recommended that the Secretary-General should continue the study of methods, definitions and classifications used in recent censuses and that draft recommendations, based on these studies, should be prepared for submission to the Population and Statistical Commissions.

The Commission was informed that the publication *Principles for a Vital Statistics System*[2], which had the approval of both the Population and the Statistical Commissions, was proving useful, particularly to under-developed countries which were attempting to establish complete systems of vital registration. It was noted also that the Statistical Office of the United Nations planned to produce a manual of vital statistics methods which would provide a necessary supplement to the *Principles*.

Sampling surveys were recommended as a means of checking the accuracy of vital registration. The Commission discussed the use of continuous *population registers* as alternatives to the conventional registration system; the Secretary-General was requested to investigate the methods and uses of the continuous register system in order to be in a position to provide information to countries which might be interested.

Population censuses, vital statistics and migration statistics were among the subjects given high priority on the Commission's programme.

The Commission considered a report on the *international definition and measurement of standards and levels of living*[3] made by a Committee of Experts which met in June, 1953, under the joint auspices of the United Nations, ILO and UNESCO. Because the Report had not been available in time, the Commission

was unable to make any recommendations on points of detail. It did express agreement, however, with the Committee's view that no single index can be devised, that no monetary indices can be recommended as general international measures and that the problem should be approached by the analysis of many " components". Among the components suggested by the Committee of Experts is one group containing several indicators of demographic conditions such as expectation of life at birth, infant mortality rate and crude annual death rate. The Commission recommended further study along prescribed lines and asked for the subject to be included in the agenda for its next meeting in 1956.

Economic and Social Council

The Economic and Social Council was convened on three occasions during the year; its seventeenth session was held from the 30th of March to the 30th of April; the eighteenth from the 29th of June to the 6th of August; and a resumed eighteenth session from the 5th of November to the 16th of December.

At the seventeenth session the Council decided to refer to the Population Commission a recommendation made by representatives of a number of under-developed countries that the Secretary-General should encourage or carry out studies on *internal migration*[4].

At the eighteenth session of the Council the Secretary-General of the United Nations presented the results of a review which he had made of the work of the Council and its subsidiary bodies and the organisation and staffing of the Secretariat. His recommendations were based on the principle that the economic and social activities of the United Nations should be directed mainly to promoting the development of under-developed countries. They were designed to effect economies and to increase efficiency, mainly in the saving of staff time and expense by the discontinuance of serial publications of limited interest and by putting out some of the work requested of the Secretariat to universities and research institutes. Under the plan of reorganisation, the Population Division was (in common with some other Divisions) regraded as a Branch with a considerably reduced staff. It was at this session that the Council accepted[5] the report on the eighth session of the Statistical Commission.

World Health Organization

Preparation for the Seventh Revision of the International List

One of the recommendations made by the WHO Expert Committee on Health Statistics at its third session was that decennial revisions of the International Statistical Classification of Diseases, Injuries and Causes of Death should be made at the middle, rather than at the end, of each decennium. This change was suggested in order that successive revisions could be completed in time to make new editions of the Classification available for coding in connection with special mortality studies (e.g. on occupational mortality) carried out in the years around the Census which, in most countries, is usually taken in the year " 0 " or " 1."

The effect of this recommendation was that preparations were begun in 1954 for the Seventh Decennial Revision Conference which was due to meet in the following year. An Advisory Group to the WHO Centre for the Classification of Diseases held its first meeting in London—at the General Register Office—from the 15th to the 20th of February 1954 with Dr. I. M. Moriyama (U.S.A.) in the Chair. Dr. M. J. Aubenque (France), Dr. D. Curiel (Venezuela) and Mr. F. F. Harris (Canada) were members of the Group. Dr. W. P. D. Logan and Mr. H.

G. Corbett represented the WHO Centre; Dr. A. H. T. Robb-Smith, Nuffield Reader in Pathology, attended as a Consultant; and Dr. Y. Biraud, Director of the WHO Division of Epidemiological and Health Statistics Services, was present with Dr. Marie Cakrtova, Chief of the Section on International Statistical Classification of Diseases and Causes of Death within that Division, who acted as Secretary to the Group.

The Advisory Group's Report[6] was sent to Governments for consideration by the Director-General of the World Health Organization. It was considered by the Registrar General's Advisory Committee on Medical Nomenclature and Statistics. The United Kingdom shared the view of the WHO Expert Committee on Health Statistics, which the Advisory Group had endorsed, that the seventh revision should be carried out with the minimum of change in classification, amendments being restricted to anomalies which had come to light in the existing code.

Expert Committee on Health Statistics

The views of governments on the Advisory Group's proposals were considered at the fourth session of the Expert Committee on Health Statistics, which Dr. W. P. D. Logan and Mr. H. G. Corbett attended in Geneva from the 13th to the 18th of September, 1954.

In addition to suggesting amendments to the categories and the tabular list published in the Manual of the *International Statistical Classification of Diseases, Injuries and Causes of Death*, the Committee recommended changes in the rules and instructions for the classification of causes of death. The Committee also listed a number of subjects which it recommended for inclusion in the agenda for the Seventh Revision Conference (since held in Paris in February, 1955). The Committee's Report[7] includes recommendations for improving information about causes of stillbirth; a statement of some of the considerations which need to be borne in mind when adapting the International List for use in underdeveloped areas; and its views on a report, made by a joint committee of experts assembled by the Secretary-General of United Nations, on indicators for measuring levels of living (see page 213). The Committee considered proposals put forward by some governments for amending the WHO Nomenclature Regulations and recommended that they should be reviewed at the Revision Conference.

W.H.O. Centre for Classification of Diseases

During 1954 the Centre, which continued its work under the direction of Dr. W. P. D. Logan assisted by Mr. H. G. Corbett, was heavily engaged in preparing material for the Seventh Revision of the International Statistical Classification of Diseases, Injuries and Causes of Death. In addition, the Centre completed a study on the tabulation of *multiple causes of death* and a *comparison of the relative use made of the rubrics of the International List in various forms of medical statistics*. The results of both were issued as WHO papers[8]. Other activities included consideration of coding problems presented monthly by the United States National Office of Vital Statistics.

Executive Board

The Executive Board met for its thirteenth session from the 12th of January to the 3rd of February and again on the 27th and 28th of May for the short fourteenth session. At the first of these it took note[9] of the Report on the first *International Conference of National Committees on Health and Vital Statistics*[10] which had been held at the General Register Office in the previous October,

considered the extension of the *general programme of work* covering a specific period to 1957, and reviewed the results of an *organizational study on programme analysis and evaluation*. It also approved the general lines on which *occupational health* activities had been developed in co-operation with the International Labour Office and the specific measures proposed with a view to stimulating interest in the increasing importance of occupational health, especially in newly industrialised countries[11]. Matters discussed at the fourteenth session included procedure for *technical discussions at future World Health Assemblies*[12].

Seventh World Health Assembly

Mr. A. E. Joll and Dr. W. P. D. Logan (both of the General Register Office) were members of the United Kingdom delegation to the Assembly of the World Health Organization in Geneva from the 4th to the 21st of May.

The programme and budget approved by the Assembly made provision for the Seventh Decennial Revision of the International Classification of Diseases, Injuries and Causes of Death in 1955. The Assembly reviewed the general programme of work for the period 1953-56[13] and a Report by the Executive Board on an organizational study on programme analysis and evaluation[14].

International Labour Office

Eighth International Conference of Labour Statisticians

Mr. W. J. Littlewood of the General Register Office took part in the Conference which was held in Geneva from the 23rd of November to the 3rd of December.

The Conference proposed a provisional list of seventy-two sub-heads to the nine major groups of the proposed *International Standard Classification of Occupations*[15] and recommended that it should be circulated to governments for comment in order that a final draft might be prepared for consideration at the Ninth International Conference of Labour Statisticians[16].

After noting that available statistics of occupational morbidity were extremely fragmentary in character, the Conference emphasized the value of studies of *occupational morbidity and mortality* and requested that the attention of governments and the World Health Organization should be drawn to the importance of compiling and publishing statistics based on available information[17]. In particular, the Conference stressed the need for statistics of occupational diseases as a means of measuring and analysing occupational hazards to the health of workers[18].

Organization for European Economic Co-operation

Manpower Committee

The Group appointed by the Manpower Committee to advise on the preparation of population forecasts held its fourth meeting on the 12th and 13th of October in Paris. It was attended by experts from Belgium, France, Italy, Sweden, Holland, Germany and the United Kingdom, as well as by observers from FAO, the European Coal and Steel Community, the International Governmental Committee for European Migration and the Council of Europe. The United Kingdom was represented by Mr. B. Benjamin.

The Group reviewed forecasts of population size which had been made by Member Countries; examined the range of mortality, fertility and migration assumptions used by them in producing alternative projections; and recommended to the Manpower Committee that further information might be obtained from some countries in order to make their assessment of future fertility variation more comparable with that of other countries.

World Population Conference

A World Population Conference was held in Rome from 31st of August to 10th of September under the general auspices of the United Nations. The Conference was convened under the rules approved by the Assembly for the calling by the Economic and Social Council of non-governmental conferences and was on a fact-finding basis, being limited in terms, by resolution of the Economic and Social Council, to the exchange of ideas and experience between experts on population matters[19]. Four hundred and fifty experts from more than seventy countries attended and some four hundred papers were submitted. The wide sweep of the agenda was made manageable by careful preparation and the Conference provided a good example of what can be achieved in the way of exchange of information by the effective co-operation of international organizations. A summary of the proceedings has been published, together with the papers in six volumes[20].

Mr. B. Benjamin and Dr. W. P. D. Logan of the General Register Office were among those from this country who attended the Conference. Papers were contributed by them and by other members of the staff: Dr. Logan wrote on *Social class variations in mortality*; Mr. Benjamin and Mr. N. H. Carrier jointly made *An evaluation of the quality of demographic statistics in England and Wales*; Mr. J. R. N. Schneider discussed *Alternative population concepts*; and Mr. L. M. Feery wrote on *Conurbations in England and Wales* with particular reference to the development of Greater London.

Other persons from Government Departments who attended the Conference were Mr. E. A. Hogan, Registrar-General for Scotland, and Mr. P. R. Cox of the Government Actuary's Department. Mr. Hogan contributed a paper on *Population trends in Scotland with particular reference to emigration* and Mr. Cox wrote *A short survey of recent developments in the statistical analysis of fertility and population growth*. A paper on *The work of the National Advisory Committee on the Employment of Older Men and Women* was contributed by Sir Harold Wiles of the Ministry of Labour and National Service. Some thirty members of University staffs or private organizations in Great Britain attended the Conference.

The suggestion that population problems merited the attention of an international conference was made to the United Nations in 1948 by Unesco whose Director-General (Dr. Julian Huxley) raised the matter in the UN Co-ordination Committee and, on the Committee's advice, arranged for it to be included in the agenda for the third session of the Population Commission. The Commission asked for further details[21] and at its fourth session, in April, 1949, accepted the view that it would be inappropriate to hold a conference until at least the main results of the censuses to be taken in and around 1950 were available and that 1954 would be about the earliest suitable date[22].

At the instance of the International Union for the Scientific Study of Population, the Population Commission considered the proposal anew at its sixth session (May 1951). The Commission recommended and the Economic and Social Council approved[23] that the Secretary-General should obtain the views of governments and interested organizations on such matters as scope, emphasis, size and place and should consider the financial implications of a conference. In June 1952 the Council gave approval to the holding of a non-governmental Conference under the auspices of the United Nations, in close collaboration with the International Union for the Scientific Study of Population and interested specialized agencies[19].

The Secretary-General accordingly convened a Preparatory Committee including Professor D. V. Glass (London School of Economics and Political Science) and other experts invited individually from France, India, Italy, Holland and the United States together with representatives of the specialized agencies (the Food and Agriculture Organization, the International Bank, the International Labour Organization, Unesco and the World Health Organization).

Preliminary discussion in the Population Commission and elsewhere revealed little enthusiasm for pruning the proposed agenda, an obviously invidious task. In the event, the Preparatory Committee found a way of covering the whole field of enquiry, without making the Conference unwieldy or impracticable, by grouping the agenda under twenty-eight heads, each of which was made the subject of a separate " meeting " organised by a chairman and a *rapporteur*. Discussion was based on the rapporteur's digest of papers submitted. Meetings were held two at a time in order to keep within the allotted span of the Conference. The results of the more specialized discussions were brought before the Conference at two of the final plenary meetings. Of these, one, which met to consider the *outlook for world population growth and distribution*, covered five broad subjects: mortality, fertility, structure of population, migration, and future population trends. The other dealt with the *economic and social implications of population trends*, which were analysed in relation to : agricultural resources; non-biological resources; capital formation, investment and employment; internal migration; ageing of the population; social aspects, with reference to patterns of family life; legislation, administrative programmes and services; and other economic and social factors.

In his closing speech as its Chairman, Professor Liebmann Hersch (President of the International Union for the Scientific Study of Population) emphasized that one of the main results of the Conference had been to show the interdependence of economic and social phenomena in general and demography, and to demonstrate the futility of over-simplified concepts of a universal law of population, supposedly valid irrespective of time and place, in any age, country or sociological situation. The Conference had also subjected current methods to searching criticism, both in relation to statistical analysis and to the improvement of the accuracy of basic data[20].

The Conference made a good deal of useful information available in its published proceedings and papers and gave demographers a good opportunity to meet and discuss their problems. Its success was in a large measure due to the work of the Population Branch of the United Nations Secretariat; Mr. John D. Durand, head of the Branch, was the Conference Secretary.

The Third International Poliomyelitis Conference

This Conference was held in Rome from the 6th to the 10th of September, 1954, to discuss the medical and social aspects of poliomyelitis and to review trends of the disease. As Dr. Logan was visiting Rome for the World Population Conference (see above), it was arranged that he should be accredited to the Poliomyelitis Conference and he was able to attend a number of its Sessions.

Brussels Treaty Organization

An officer of the General Register Office was one of a group of Assistant Principals from United Kingdom Government Departments to be welcomed in Paris by the Directors of the Ecole Nationale d'Administration. The occasion marked the beginning of a fortnight's study of French administration which had been arranged as one of a series intended by the Organization to give administrators the opportunity of becoming acquainted with differences in the law and practice of the Brussels Treaty countries.

Visitors from Overseas

Twenty-nine visitors from abroad were received at the General Register Office during the year 1954. Some came under fellowship schemes from international organizations such as the United Nations, the World Health Organization and the Colombo Plan. Others were sent for purposes of similar studies by their Governments. Others again were senior officials who took the opportunity of calling while passing through London en route to an international conference. The countries from which they came were Australia, Barbados, Burma, Canada, Ceylon, Denmark, Eygpt, France, India, Iraq, Japan, Kuwait, Lebanon, Malaya, Nigeria, Pakistan, Rhodesia, Sweden and the United States.

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12. Resolution EB.14R.19. Technical discussions at future Health Assemblies. *Official Records of the WHO, No.* 57. Geneva, 1954.
13. Resolution WHA 7.9. General programme of work for a specific period. *Official Records of the WHO, No.* 55. Geneva, 1954.
14. Resolution WHA 7.10. Organizational study on programme analysis and evaluation. *Ibid.*
15. Resolution II. Concerning major and minor groups of the International Standard Classification of Occupations. *Record of the Eighth International Conference of Labour Statisticians.* (ILO document G.B. 128/3/1.)
16. Resolution IX. Concerning further development of the International Standard Classification of Occupations. *Ibid.*
17. Resolution III. Concerning statistics of occupational mortality and morbidity. *Ibid.*
18. Resolution IV. Concerning statistics of occupational diseases. *Ibid.*
19. Resolution 435(XIV). *Economic and Social Council Official Records: Fourteenth Session: Supplement No.* 1. United Nations, New York, 1952.
20. Proceedings of the World Population Conference, Rome, 31st August-10th September, 1954. *Summary Report.* United Nations, New York, 1955.
21. Population Commission: Report of the Third Session. *Economic and Social Council Official Records: Seventh Session: Supplement No.* 7. United Nations, New York, 1950.
22. Population Commission: Report of the Fourth Session. *Economic and Social Council Official Records: Ninth Session: Supplement No.* 7. United Nations, New York, 1953.
23. Resolution 389 (XIII) C. *Economic and Social Council Official Records: Thirteenth Session: Supplement No.* 1. United Nations, New York, 1951.

THE REGISTRATION SERVICE

Searches and Certificates

Table XC shows the extent to which the records in the General Register Office have been used since 1866.

Table XC

Year*	Total searches	Searches for Government Departments	Searches paid for by the public	Certificates issued	Amount received
					£ s. d.
1866	12,135	—	12,135	10,017	1,860 15 6
1875	26,356	—	26,356	20,282	3,879 15 6
1885	36,450	—	36,450	27,682	5,317 13 6
1895	53,289	—	53,289	35,727	7,200 12 6
1905	65,142	—	65,142	50,310	9,611 9 0
1915	202,939	118,788	84,151	69,746	13,007 10 0
1925†	488,781	339,790	148,991	115,378	25,610 2 6
1935	591,056	443,783	147,273	119,351	26,221 9 6
1945	569,266	380,730	188,536	187,077	39,474 14 3
1946	826,380	544,843	281,537	271,208	56,676 8 9
1947	1,180,519	873,868	306,651	299,525	61,900 15 6
1948†	943,705	658,251	285,454	350,626	56,954 15 9
1949	793,386	527,814	265,572	310,723	52,728 3 6
1950	732,511	486,386	246,125	285,487	51,215 17 8
1951	809,702	555,067	254,635	312,595	52,966 8 0
1952	778,139	545,390	232,749	293,384	‡57,569 7 6
1953†	613,343	402,767	210,576	278,757	62,437 3 4
1954	599,191	373,025	221,166	288,884	65,271 11 8

* These periods relate to 52 weeks except those marked † which relate to 53 weeks.

‡ On 1st July, 1952, fees were increased by 50 per cent.

Table XCI analyses the searches undertaken on behalf of Government Departments since 1947.

Table XCI

Year*	1947	1948†	1949	1950	1951	1952	1953†	1954
Contributory Pensions and National Insurance Benefits ..	415,294	411,897	264,344	300,050	354,952	355,655	313,364	323,884
Family Allowances	362,846	170,204	182,308	127,013	147,743	138,115	45,946	5,290
Non-Contributory Pensions ..	46,863	38,250	23,917	22,430	13,210	10,825	7,346	6,159
Ministry of Pensions	39,010	27,028	25,456	20,593	19,748	18,574	17,981	16,707
Navy, Army and Air Force ..	9,855	8,872	10,932	7,612	12,339	13,817	8,559	6,513
Others	—	2,000	20,857	8,688	7,075	8,404	9,571	14,472
Total	873,868	658,251	527,814	486,386	555,067	545,390	402,767	373,025

*These periods relate to 52 weeks except those marked † which relate to 53 weeks.

Table XCII shows the numbers of Birth and Adoption certificates issued from the General Register Office since 1947 including short certificates introduced in that year.

Table XCII

Year*	Birth Certificates			Adoption Certificates			Adoptions registered
	Standard	Short	Total	Standard	Short	Total	
1947	211,000	1,060	212,060	18,600	1,150	19,750	18,269
1948†	176,631	62,662	239,293	13,112	32,331	45,443	18,550
1949	158,510	59,167	217,677	13,464	20,370	33,834	17,331
1950	143,135	55,307	198,442	10,102	15,824	25,926	12,748
1951	153,935	67,697	221,632	10,080	15,688	25,768	13,854
1952	132,431	73,505	205,936	9,940	14,666	24,606	13,900
1953†	111,325	84,063	195,388	9,417	14,048	23,465	13,001
1954	111,307	92,207	203,514	9,966	15,464	25,430	13,005

* These periods relate to 52 weeks except those marked † which relate to 53 weeks.

NATIONAL HEALTH SERVICE CENTRAL REGISTER

During the year 1954, the National Health Service Central Register (which is maintained by the General Register Office on an agency basis) received notifications of 1,432,471 persons who were reported as having registered with doctors for the first time. It was found from the register that 153,200 of these were already on doctors' lists.

The Central Register also notified Executive Councils of the names of 945,589 persons for removal from doctors' lists by reason of death (490,906), enlistment (224,149), embarkation (233,609), or becoming long-term patients in mental hospitals (6,925). In addition, 1,327,230 persons were notified as having changed their doctor on removal from the area of one Executive Council to another.

PARLIAMENTARY AND LOCAL GOVERNMENT ELECTORS

Electoral Registers

As required by the Electoral Registers Act and the Representation of the People Act, 1949, a local register based on a canvass is prepared in the autumn of each year, distinguishing between (*a*) those who are parliamentary and local government electors by virtue of residence on the qualifying date and (*b*) local government electors who on the qualifying date had a non-resident qualification by occupying as owner or tenant any rateable land or premises of not less than £10 rateable value per occupier. There is also a service register for any members of the forces and other persons employed in the service of the Crown in a post outside the United Kingdom (and for their wives if with them). The qualifying date is 20th November* in England and Wales and the registers must be used for elections falling within the twelve months beginning on 16th March of the following year.

Total Electorate

The particulars recorded in Tables U and V for 1954 have been taken from statements furnished to the Registrar General by the Electoral Registration Officers of the several areas, and relate to the register which came into force on 16th March, 1954.

Table U refers to Parliamentary and Table V to Local Government electors and elections. From these tables has been extracted the summary in Table XCIII showing the total electorate at various dates, selected to demonstrate the changing franchise. Comparison of the registers of 1928 and 1929 shows the effect of the Act of 1928, which gave to women, the same franchise as that to which men were entitled; and comparison of the registers of 1939 and 1945 indicates the effect of the Act of 1945, which increased the local government electorate by the addition of those qualified for the parliamentary electorate but previously not entitled to vote at local government elections.

The total parliamentary electorate included before 1949 plural representation of those persons registered in more than one constituency by reason of their possessing the necessary residence or business qualification or being entitled to be registered in a University constituency.

A person not of full age on the qualifying date but of full age on the following 15th June is to be included on the register though there is no entitlement to vote in any election before 2nd October of the following year. Such persons have been excluded from the table; the 1951 register was the first to be affected in this way.

---

* Under the Electoral Registers Act, 1953, the qualifying date has been altered to the 10th October and the date from which the new register is to be used to the 16th February; beginning with the 10th October, 1954, and the 16th February, 1955, respectively.

Table XCIII.—Parliamentary and Local Government Electors, 1918 to 1954, England and Wales

Register	Parliamentary Register (including University Constituencies to 1948)			Local Government Register
	Total	Business Premises qualifications (included in Total)	Persons on Absent Voters' List (included in Total)	
1918 (Autumn)	17,222,983	159,013	3,362,028	13,930,130
1928 (Autumn)	19,866,649	205,793	154,432	17,179,487
1929 (Spring)	25,095,793	371,594	174,731	18,620,395
1939 (Autumn)	28,348,555	354,831	168,480	21,685,772
(Qualifying date in brackets)	Total at qualifying date	Business Premises Register (included in Total)	Service Register (included in Total)	Local Government Register at qualifying date
1945 (30th June)	29,368,684	55,164	2,749,531	29,216,823
1948 (30th June)	31,629,861	49,575	284,004	31,455,419
1949 (10th June)	30,173,966	—	127,334	30,258,862
1952 (20th Nov. 1951)	30,472,288	—	272,264	30,584,434
1953 (20th Nov. 1952)	30,491,691	—	274,646	30,606,472
1954 (20th Nov. 1953)	30,525,190	—	276,156	30,640,141

It will be seen that since 1952 both the total and the service register have remained stable at about 30·5 million and about 270 thousand respectively.

The percentages which the total parliamentary electorate represented of the estimated total population in selected years from 1939 to 1954 were :—

1939	1945	1946	1948	1949	1952	1953	1954
68·1	68·9	72·0	72·7	68·9	69·0	68·8	68·6

The changes made in the Parliamentary franchise between 1939 and 1945-48 did not affect sufficiently large numbers of persons to exert a significant influence on the percentages, though the varying methods of compiling the registers had some effect. In the years 1944 to 1948 the electoral registers were maintained by the machinery of National Registration, while those up to 1939 and from 1949 onwards were based on a canvass. The former procedure must have had an advantage over the latter in securing an earlier and more complete addition to the registers of persons who had moved into a new area or otherwise acquired new voting qualifications, but it may have made less difference in securing the removal from electoral registers of persons no longer qualified. This would account for the fall in the proportion in 1949 when the first post-war register based on a canvass was prepared.* (The relatively low proportion in 1945 is probably due in part to incompleteness in the service register of that year.) The number of Parliamentary electors registered in England and Wales since 1939 has corresponded almost exactly with the estimated total population aged 21 and over

* A minor influence in the same direction was the abolition (by the Representation of the People Act, 1948) of the business premises qualification and the university franchise.

excluding aliens resident here. This indicates that the gross discrepancies due to time lags in adding names to the registers or removing them and to various errors, and the net discrepancies in different constituencies, largely cancel out when aggregated for the country as a whole.

In contrast the Local Government franchise was made larger after the war. For a precise record of the changes reference should be made to the Acts concerned, in particular to those of 1928, 1943, 1944 and 1945, but in brief the *parliamentary* qualification had previously been based on *residence* and the local qualification on occupation of *property*; the Act of 1945 changed the basis of local qualification to residence or occupation. The change resulted in a substantial rise in the proportion of the total population included in the local electorate from 52·3 per cent in 1939 to 71·6 per cent in 1946 and 68·9 per cent in 1954, the latter proportions being virtually the same as those for Parliamentary electors.

Central Index of Service Voters

During 1954, the Central Index of Service Voters (which is maintained by the General Register Office on an agency basis) received from Electoral Registration Officers 148,963 declarations by persons qualified to be included in the electoral registers as service voters. A further 45,321 declarations were received in respect of persons under the age of 21 years. The Central Index notified Electoral Registration Officers of 24,688 persons who had made declarations before reaching the age of 21 years, but who, during 1954, attained that age. Altogether 173,651 new service voters were added to the electoral registers.

In the same period Electoral Registration Officers were notified of 87,746 names of persons whose declarations ceased to be in force because of death, release from the forces, return from abroad of wives, Government servants, etc. and 22,907 declarations by persons under full age were cancelled because they ceased to have a service qualification before attaining full age.

APPENDIX A

SUPPLEMENT TO TABLE MM OF PART II.

England and Wales

Legitimate maternities to women married once only by mother's calendar year of marriage, age at marriage and the number of her previous liveborn children.

Note: Cases in which the mother's age, year of marriage or number of previous children were *not stated* have been proportionally distributed and included with the stated cases.

Age at marriage	Legitimate Maternities, the number of previous liveborn children being :													Previous liveborn children	
	All categories	0	1	2	3	4	5	6	7	8	9	10–14	15 and over	Total Number	Average
1953 Occurrences—Calendar Year of Marriage 1943															
All Ages ..	**17,084**	**1,245**	**4,842**	**5,094**	**3,099**	**1,546**	**773**	**330**	**104**	**32**	**9**	**10**	—	**37,524**	**2·20**
Under 20 ..	4,658	257	1,076	1,383	972	511	278	122	45	9	2	3	—	11,359	2·44
20– ..	9,683	739	2,921	2,924	1,651	823	378	172	48	18	5	4	—	20,501	2·12
25– ..	2,330	204	726	678	407	177	90	32	9	4	2	1	—	4,776	2·05
30– ..	397	43	113	106	66	34	27	4	2	1	—	1	—	850	2·14
35– ..	16	2	6	3	3	1	—	—	—	—	—	1	—	38	2·38
40– ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
45 and over	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1954 Occurrences—Calendar Year of Marriage 1943															
All Ages ..	**14,023**	**882**	**3,466**	**4,009**	**2,712**	**1,536**	**761**	**396**	**182**	**55**	**15**	**8**	**1**	**33,895**	**2·42**
Under 20 ..	3,929	201	782	1,040	835	523	300	142	76	22	5	3	—	10,595	2·70
20– ..	8,047	537	2,128	2,360	1,511	802	384	202	87	27	7	2	—	18,629	2·32
25– ..	1,774	124	496	533	304	185	66	41	15	5	3	1	1	3,990	2·25
30– ..	266	20	57	75	60	25	11	11	4	1	—	2	—	666	2·50
35– ..	7	—	3	1	2	1	—	—	—	—	—	—	—	15	2·14
40– ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
45 and over	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1954 Occurrences—Calendar Year of Marriage 1944															
All Ages ..	**16,427**	**1,144**	**4,313**	**4,985**	**3,047**	**1,591**	**800**	**359**	**135**	**31**	**17**	**5**	—	**37,340**	**2·27**
Unde 20 ..	4,135	206	878	1,187	858	511	290	136	54	11	4	—	—	10,638	2·57
20– ..	9,597	691	2,731	2,962	1,716	841	394	178	58	16	7	3	—	20,833	2·17
25– ..	2,321	209	599	738	401	203	102	37	20	4	6	2	—	5,069	2·18
30– ..	358	34	102	96	68	35	13	7	3	—	—	—	—	766	2·14
35– ..	16	4	3	2	4	1	1	1	—	—	—	—	—	34	2·12
40– ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
45 and over	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

APPENDIX B

STATISTICS DIVISION OF THE GENERAL REGISTER OFFICE, 1st JANUARY, 1956

Administrative: A. E. Joll, Assistant Secretary and Deputy to Registrar General
W. J. Littlewood
F. A. Rooke-Matthews

Professional: B. Benjamin, B.Sc., Ph.D., F.I.A. } Chief
W. P. D. Logan, M.D., Ph.D., B.Sc., D.P.H. } Statisticians
A. J. Boreham, B.A.
Miss E. M. Brooke, M.Sc.
D. G. MacKay, M.A., M.B., Ch.B.
A. McKenzie, M.B., B.S., D.T.M. & H.
Miss M. P. Newton, M.A.
J. R. L. Schneider, B.Sc. (Econ.)

APPENDIX C

COMMITTEES ON WHICH OFFICERS OF THE GENERAL REGISTER OFFICE SERVED DURING 1954

Accidents in the Home,
  Standing Inter-Departmental Committee.

Boundary Commission for England.

Boundary Commission for Wales.

Medical Nomenclature and Statistics Committee,
  Sub-Committee on Cancer Registration.
  Sub-Committee on Statistics.

Medical Research Council,
  Committee for Research on Social and Environmental Health.
  Statistical Committee.

Ministry of Health,
  Study Group on Preventive Medicine.

National Coal Board,
  Advisory Panel on Epidemiology.

National Health Service,
  International Distribution Committee.
  Medical Distribution Committee (England and Wales).
  Records Committee.

Organization for European Economic Co-operation,
  Manpower Committee: Group of Demographic Experts.

Population Investigation Committee.

Social and Economic Research,
  Inter-Departmental Committee.
  Sub-Committee on the Ministry of Food.

Society of Medical Officers of Health,
  Sub-Committee on District Nursing Records.
  Advisory Committee on Research.

World Health Organization,
  Expert Committee on Health Statistics.
  Advisory Group to the World Health Organization's Centre for the Classification of Diseases.

APPENDIX D

ARTICLES BY OFFICERS OF THE GENERAL REGISTER OFFICE PUBLISHED DURING 1954

Benjamin, B., ...	Medicine and Medical Services in the United Kingdom. *Journal of the Royal Statistical Society*, Vol. 117, Part II, 1954.
Benjamin, B., ...	Tuberculosis in Childhood—with Bentley, F. G. and Grzybowski, S. *N.A.P.T.*
Benjamin, B., ...	Securing Wider Appreciation of Health Statistics, Part III. *Bulletin World Health Organization*, 11, 114-123, 1954.
Benjamin, B., ...	The Ageing Population. *Monthly Bulletin of the Ministry of Health*, Vol. 13, page 214, December, 1954.
Benjamin, B., and Logan, W. P. D., .. [*with Gemmell, A. A.,*]	The Incidence of Toxæmia. *The Journal of Obstetrics and Gynæcology of the British Empire*, Vol. LXI, No. 4, August, 1954.
Brooke, E. M., ...	Some Statistics of Admissions to Mental Hospitals, 1949-1951. *Monthly Bulletin of the Ministry of Health*, Vol. 13, page 2, January, 1954.
Logan, W. P. D., ...	The Effects of Virus Infections in Pregnancy. *Medical Illustrated*, Vol. 8, No. 8, August, 1954.
Logan, W. P. D., ...	Morbidity Statistics from General Practice. *The Practitioner*, Vol. 173, page 188, August, 1954.
Logan, W. P. D., ...	Social Class Variations in Mortality. *British Journal of Preventive and Social Medicine*, Vol. 8, No. 3, page 128, July, 1954. (Reprinted in Public Health Reports, Vol. 69, No. 12, page 1217, December, 1954.)
MacKay, D. G., ...	Average Length of Stay for certain Dental Conditions among Patients Discharged during 1951 from Hospitals participating in the In-patient Enquiry. *Monthly Bulletin of the Ministry of Health* Vol. 13, page 166, September, 1954.
Schneider, J. R. L., ...	Note on the Accuracy of Local Population Estimates. *Population Studies*, Vol. VIII, No. 2, page 148, November, 1954.

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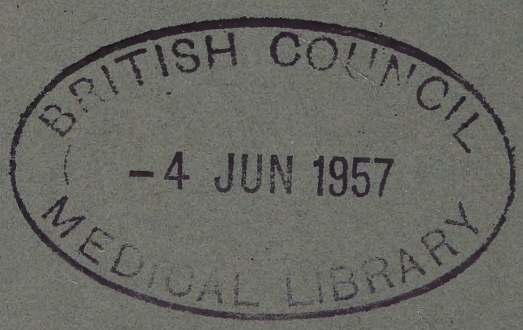

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